WASHINGTON STATE DEPARTMENT OF ECOLOGY

INITIAL INVESTIGATION FIELD REPORT

ERTS Number: 647797
Parcel #(s): 0417103017
COUNTY: Pierce

SITE INFORMATION

Site Name (e.g., Co. name over door): LRI 304th St. Landfill	Site Address (including City and Zip+4): 30919 Meridian St. E. Graham, WA 98338	Site Phone: 253/377-2958
Site Contact and Title: Jim Crandall, Landfill Manager	Site Contact Address (including City and Zip+4): same as above	Site Contact Phone: same as above
Site Owner: P C Recycling, Composting & Disposal LLC	Site Owner Address (including City and Zip+4): 17925 Meridian E Puyallap, WA 98375	Site Owner Phone: same as above
Site Owner Contact:	Site Owner Contact Address (including City and Zip+4):	Owner Contact Phone:
Alternate Site Name(s):	Comments:	
Previous Site Owner(s):	Comments:	

Latitude (Decimal Degrees): 46.96949
Longitude (Decimal Degrees): -122.29086

INSPECTION INFORMATION

Inspection Conducted? Yes ☐ No ☒ Date/Time: 04.03.14; 9 am Entry Notice: Announced ☒ Unannounced ☐

Photographs taken? Yes ☒ No ☐

Samples collected? Yes ☐ No ☒ 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:** ☐
Release or threatened release does not pose a threat	☐	
No release or threatened release	☐	
Refer to program/agency (Name:_____)	☐	
Independent Cleanup Action Completed (i.e., contamination removed)	☒	

COMPLAINT (Brief Summary of ERTS Complaint):
Hydraulic oil spilled onto a gravel parking area.

CURRENT SITE STATUS (Brief Summary of why Site is recommended for Listing or NFA):
The impact from this spill affected both soil and water in a stormwater collection ditch, and has been successfully remediated.

Investigator: S. Bell Date Submitted: 10.27.14

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.):

The subject site is the LRI Landfill (LRI), a municipal solid waste landfill serving Pierce County. The property is owned by Pierce County Recycling, Composting & Disposal, LLC doing business as LRI. LRI is an engineered, lined landfill that began operating in December 1999 under a permit from the Tacoma-Pierce County Health Department. It is located on the southeast corner of the intersection of 304th Street E and SR 161 (Meridian E) in Graham, and encompasses many parcels. A restored wetland and a storm water detention pond occupy about a quarter of the site at the north end of the property. The south fork of Muck Creek traverses the northern section of the property also, and the wetland drains into the creek.

Groundwater, landfill gas, and surface water are routinely monitored and the landfill operations and site are routinely inspected. The property itself encompasses 320 acres, although full buildout is anticipated to cover only 169 acres. As of the end of calendar year 2013, 93 acres had been constructed and 12.3 million tons of solid waste had been placed into active cells.

On the morning of 03.31.14, landfill personnel noted a spill of approximately 60 gallons of hydraulic oil from a spare tipper trailer. The tipper was parked over bare ground on the south side of the active area of the landfill. A hydraulic hose had been removed from the spare trailer tipper several days prior, on March 26th or 27th , to replace a failed hose on the primary tipper used at this facility.

The spill impacted soil beneath and adjacent to the tipper. Rain occurred over the weekend before the spill was found, and carried hydraulic oil into an adjacent shallow drainage ditch immediately southwest of the tipper, through a culvert, and into another larger main ditch connected to the site's storm water collection system. The storm water collection system consists of a series of connected open ditches and pipes around the south and west sides of the active landfill before reaching the storm water detention pond. The primary impact of this spill to the storm water collection system was limited to the first open storm water ditch, with some breakthrough to the second ditch in the series. The impacted soil and storm water were on parcels0417103017 and 0417103018.

I spoke with Jim Crandall, the Landfill Manager, on 03.31.14 about the spill. He verified that the spill impacted soil and water in the start of the storm water collection system. He told me that they were working on the cleanup, using a vactor truck, and that approximately 10,000 gallons of water had been removed from the impacted storm water ditch. Jim informed me that landfill personnel were conducting the cleanup, but their contract consultant (SCS Engineers) would collect confirmation samples. We later set up an appointment for me to inspect the impact area on 04.03.14, as an additional component to the routine TPCHD landfill inspection conducted by Andy Comstock.

I met with Jim Crandall and Olivier Allen-Moi at 9 am on 04.03.14. Also present were Andy Comstock and two additional Health Department staff who were job shadowing (Jacques Colon and Maggie Morehouse). Jim and Olivier provided most of the information described above before we travelled to the impact area for an inspection. They told me that the water and soil already removed from the impact areas had been placed in the active cell portion of the landfill. Absorbent pads and booms were in the first storm water collection ditch, and around the discharge point into the second storm water collection ditch. Petroleum sheen was visible in the two ditches, and appeared to be well contained with the absorbent material placement. About 6 inches of surface soil had been removed from the area adjacent to the tipper, and sheen testing of soil within that area was negative. The soil under the tipper had not been excavated although it was the initial impact area. This latter impact area as well as a shallow drainage ditch and depression near the first culvert were still visibly impacted with petroleum, and a small amount of puddled water present in the shallow ditch also displayed petroleum sheen.

I asked Jim and Olivier to remove the remaining impacted areas, and demonstrated how to use the sheen test to identify areas needing removal, and to determine if sufficiently clean limits had been achieved before collecting confirmation samples for laboratory analysis. I asked Olivier to sample the storm water in the collection ditch to ensure they were in compliance with their NPDES permit, and to continue using absorbent materials to remove hydraulic fluid/sheen from the water surface. I also asked Jim and Olivier to monitor the soil banks of the collection ditch as the water fluctuated for petroleum impact and assess the need for any additional remediation.

The initial cleanup report submitted by SCS did not provide sufficient documentation, nor did it contain sufficient sampling data to demonstrate that the substantive requirements of MTCA had been met. I met with George Duvendack, LRI's District Manager, on site for a re-inspection and discussion of additional work needed to satisfy a recommendation for an NFA. The meeting occurred on 08.08.14; Olivier Allen-Moi (LRI) and Dan Venchiarutti (SCS) were also present. There were no obvious indications that contamination remained in the soil or ditches; e.g., staining, odor, or sheen. Additional sampling points were agreed upon, as well as clarifications and additions needed in the cleanup report.

The revised cleanup report was submitted on 07.29.14. The report describes both the initial and follow-up remediation efforts, summarized below.

03.31.14 – 04.01.14:
•Gravel and soil were removed from the impacted area adjacent to the tipper, the excavation measured 18' by 51' by 0.5 deep, and two confirmation samples collected from the area;
•Shallow soil was removed from the water edge of both banks of the 200' long section of the primary impacted storm water ditch, and a

confirmation sample collected from each bank;
•Approximately 10,000 gallons of impacted water was vactored from the storm water ditch;
•All removed soil (80 cubic yards) and water were placed in the landfill for disposal.

04.03.14:
•Another 8 cubic yards of soil was removed from 10' by 6' area beneath the tipper and along a 20' by 1.5' section of the shallow drainage ditch immediately southwest of the tipper;
•Excavated material was placed in the landfill for disposal;
•Two water samples were collected from the main storm water ditch for oil and grease analysis, and results indicated compliance with LRI's NPDES permit.

04.09.14:
Another 2 cubic yards of shallow soil was removed from the culvert inlet pipe (culvert #1) southwest of the tipper and from the downstream culvert (culvert #2) connecting the first storm water ditch to the second ditch.

07.09.14:
Four additional confirmation soil samples were collected, one each from the excavated area beneath the tipper, the shallow drainage ditch, and culverts 1 and 2.

All confirmation samples were submitted for NWTPH-dx analysis. Of the eight confirmation samples, five were non-detect and the remainder ranged from 82 to 440 mg/kg, well below the 2000 mg/kg cleanup standard.

The information provided by LRI and SCS indicates this spill of hydraulic oil was satisfactorily remediated. The TPCHD recommends no further action at this time.

(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, isopropranol, 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	RB					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
	Arsenic						Arsenic
Pesticides	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 Ordinance						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						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)

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, lodo 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 derivitive. 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
- ☐ Voluntary Cleanup Program
- ☐ Federal-supervised or conducted
- ☐ Independent Action
- ☐ Ecology-supervised or conducted

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

Site Manager (Default: Southwest Region): _____

Specific confirmed contaminants include:

_____ in Soil

_____ in Groundwater

_____ in Other (specify matrix: _____)

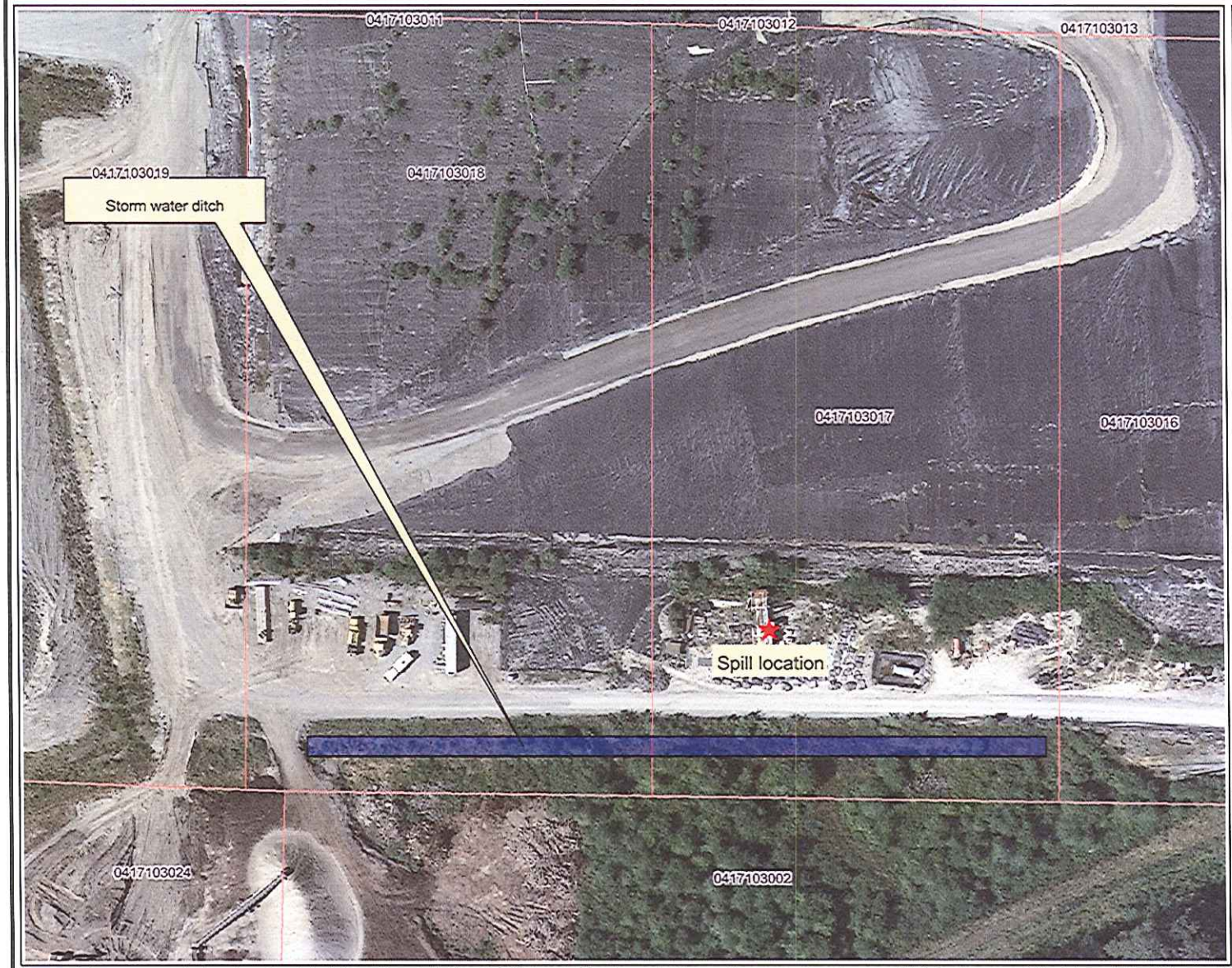
Facility/Site ID No. (if known):

_____

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.

ERTS 647797, LRI 304th St. Landfill



Map Legend

Tax Parcels
- Base Parcel
- Condominium
- Other

Roads
- Interstate
- Limited Access State Routes
- Other State Routes
- Ramps
- Major Arterial
- Collector
- Local Access

County - 2011 - Ortho

Scale 1:1,498

0 60 120 ft.

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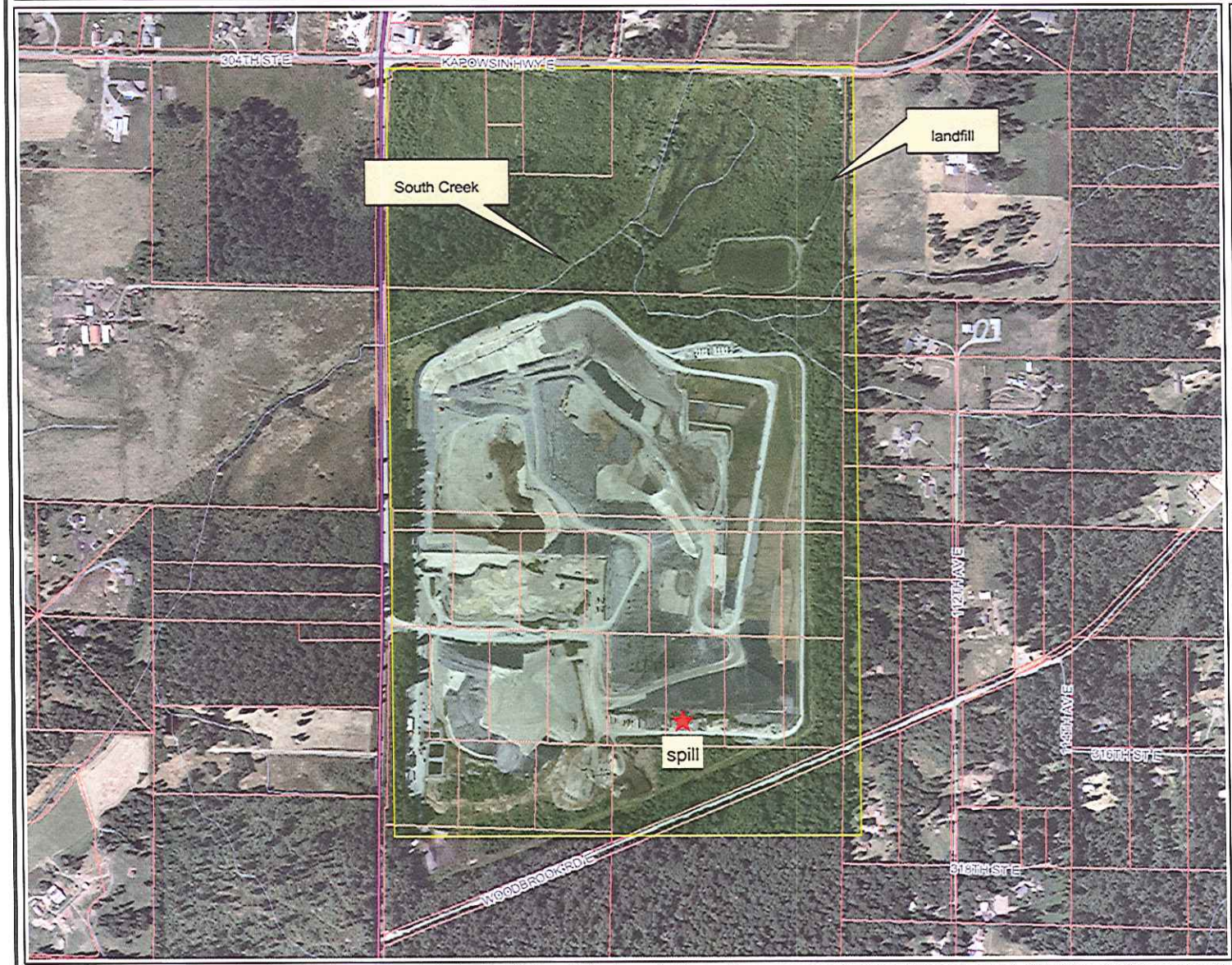
Tacoma - Pierce County Health Department
Healthy People in Healthy Communities
www.tpchd.org

ERTS 647797, LRI 304th St. Landfill



Map Legend

Tax Parcels
- Base Parcel
- Condominium
- Other

Hydro - Centerlines
- Stream
- Piped Stream Sections

Roads
- Interstate
- Limited Access State Routes
- Other State Routes
- Ramps
- Major Arterial
- Collector
- Local Access

County - 2011 - Ortho

Scale 1:10,372

0 425 850 ft.

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