INITIAL INVESTIGATION FIELD REPORT

WASHINGTON STATE DEPARTMENT OF ECOLOGY

☐ **Check this box if you have attached any documents to this form (using the paperclip icon on the left).**

ERTS #(s):	681546
Parcel #(s):	2123069016
County:	King
FSID #:	2020
CSID #:	7027
UST #:	

SITE INFORMATION

Site Name (Name over door):	Site Address (including City, State and Zip):	Phone / Email
King County Cedar Hills Landfill (May 2018 leachate release)	16645 228th Ave SE Maple Valley, WA 98038	
Site Contact, Title, Business: Joan Kenton, Environmental Compliance Coordinator, King County Solid Waste Division	Site Contact Address (including City, State and Zip): 201 S Jackson St Suite 701 Seattle, WA 98104	Phone (206) 263-0805 Email jkenton@kingcounty.gov
Site Owner, Title, Business: King County	Site Owner Address (including City, State and Zip):	Phone Email
Site Owner Contact, Title, Business:	Site Owner Contact Address (including City, State and Zip):	Phone Email
Previous Site Owner(s):	Additional Info (for any Site Information Item):	
Alternate Site Name(s):		

Latitude (Decimal Degrees):	47.45625
Longitude (Decimal Degrees):	-122.05453

INSPECTION INFORMATION

☑ Please check this box if there is relevant inspection information, such as data or photos, in an existing site report for this site.

Inspection Conducted? Yes ☒ No ☐	Date/Time: May 2, 2019 10:30 am	Entry Notice: Announced ☒	Unannounced ☐
Photographs taken? Yes ☒	No ☐	Note: Attach photographs or upload to PIMS	
Samples collected? Yes ☐	No ☒	Note: Attach record with media, location, depth, etc.	

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 (contamination removed)	☐	

COMPLAINT (Brief Summary of ERTS Complaint):

Joan Kenton with the King County Solid Waste Division reported a leachate release at the Cedar Hills Regional Landfill. The leak occurred on May 23-24, 2018.

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

Actions were taken at the time of the release to limit the time the leachate was in contact with environmental media. Samples were taken in the marshy area where leachate ended up after the leachate was removed. No chemicals were present in these samples above the sediment screening levels, indicating no further action is needed to address this release. Recommendation: add to existing site file for the Landfill.

Investigator: Kim Wooten Date Submitted: 6/18/2021

OBSERVATIONS ☑ **Please check this box if you included information on the Supplemental Page at end of report.**

Description (If site visit made, 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.):

Release

Landfill leachate coming to the surface through a road on site was discovered at approximately midnight on May 24, 2018. The source of the leachate was a pipe coming from the condensate knockout. On May 23rd, to a second effluent line was connected at the knockout to improve flow. The second line was accidentally connected to a pipe that had been abandoned under the west haul road (see figures below). The release had been stopped by 2 am on May 24th.

Once the leachate surfaced at the abandonment point, it flowed west-southwest across the road into a stormwater drainage ditch. From there, it flowed downstream into a marshy area.

Response to release

As soon as the release was discovered, a vacuum truck was brought on site to capture the leachate. Crews vacuumed leachate out of the stormwater ditch, rinsed and cleaned it, and removed the leachate from the marshy area. A second round of removal in the marsh was performed on May 25th to remove any additional liquid that had accumulated in this area.

The high water line in the marsh, before leachate removal began, was marked with stakes. Sediment samples were collected along the high water line on May 24th, and were analyzed for a number of chemical classes that are found in leachate (volatile organics, semivolatile organics, metals, pesticides, herbicides, and polychlorinated biphenyls).

Ecology was consulted soon after the release to determine what the applicable cleanup levels would be. Based on information available to us at the time, we initially provided soil cleanup levels for a list of analytes based on analytical data from 2017 leachate samples.

After reviewing the Lechate Release Memo and associated reports, the Investigator thought that the impacted area may be more correctly classified as sediment for the purposes of establishing cleanup levels. A site visit was conducted in May 2019, including the Investigator, Ecology Solid Waste Management staff, and King County staff. Based on observations (see photo below) during the visit and conversations with staff about conditions in the area, it was determined that the area should be classified as sediment, based on the six consecutive weeks of water present criteria.

Documents reviewed:

King County Solid Waste Division. December 2018. Memo Re: Cedar Hills Regional Landfill, Leachate Release May 2018; Operating Permit #PR0015736. (includes 4 attachments)

leachate data (Attachment F) and figure (2-2C) from 2017 Annual Groundwater Monitoring Report for Cedar Hills Regional Landfill

CONTAMINANT GROUP	CONTAMINANT	SOIL	GROUNDWATER	SURFACE WATER	AIR	SEDIMENT	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						TEX
	Petroleum Diesel						Petroleum Diesel
	Petroleum Gasoline						Petroleum Gasoline
	Petroleum Other						Oil-range organics
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						PCE, chloroform, EDB, EDC, MTBE
	Polychlorinated Biphenyls (PCB)					B	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					B	Cr, Se, Ag, Ba, Cd
	Lead					B	Lead
	Mercury						Mercury
	Arsenic					B	Arsenic
Pesticides	Non-halogenated pesticides						Pesticides without halogens (Examples: parathion, malathion, diazinon, phosmet, carbaryl (sevin), fenoxycarb, aldicarb)
	Halogenated pesticides					B	Pesticides with halogens (Examples: DDT; DDE; Chlordane; Heptachlor; alpha-beta and delta BHC; Aldrin; Endosulfan, dieldrin, endrin)

CONTAMINANT GROUP	CONTAMINANT	SOIL	GROUNDWATER	SURFACE WATER	AIR	SEDIMENT	DESCRIPTION
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)

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

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 if 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 WAC 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 II REVIEWER 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: Update to file

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: _____): _____

Specific confirmed contaminants include:

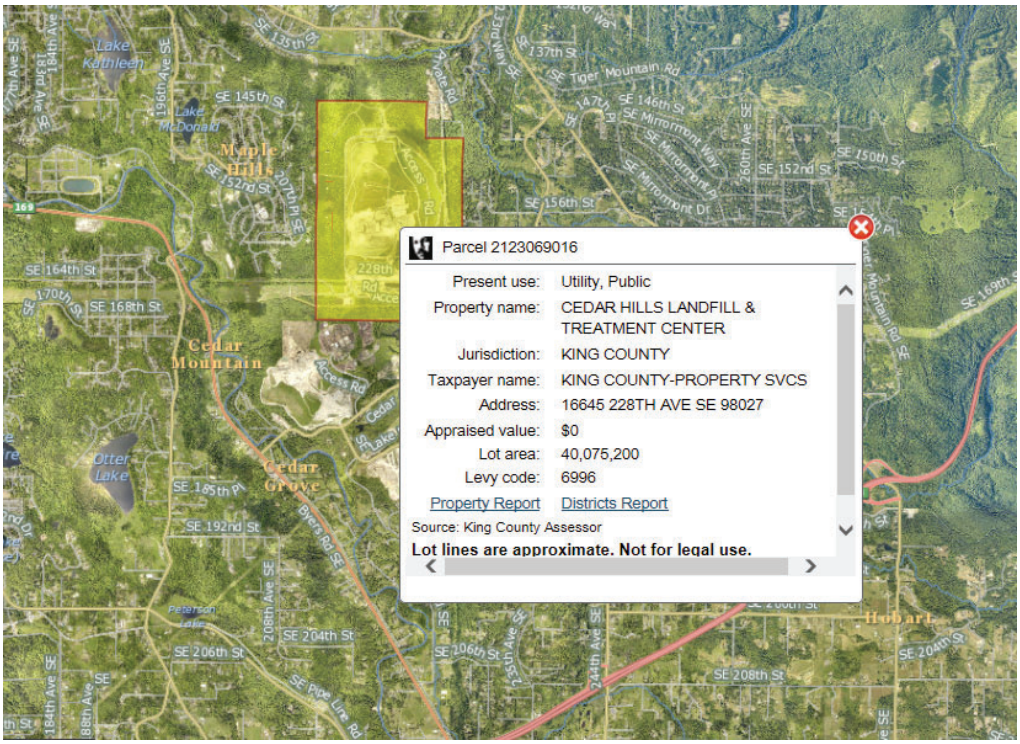
_____ in Soil

_____ in Groundwater

_____ in Other (specify matrix: _____)

Facility/Site ID No. (if known):
2020
Cleanup Site ID No. (if known):
7027

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.



Additional or Supplemental Information from Observations Page

Data review

Ecology reviewed the data using sediment screening levels, and determined that no further action was necessary to address this release. We requested an updated version of the Leachate Spill Response report so that the correct screening levels would be included in the report. The IIFR was not completed at the time the data was received to allow time for this report to be revised. As of the completion date of the IIFR, a revised report has not been received. If Ecology ever receives a revised report, it will be added to the site file.

Sample results and sediment screening levels are shown in the table below. Screening levels protective of the benthic community were used to evaluate the sample results. No sample exceeded the sediment screening levels.

Additional or Supplemental Information from Observations Page (b)

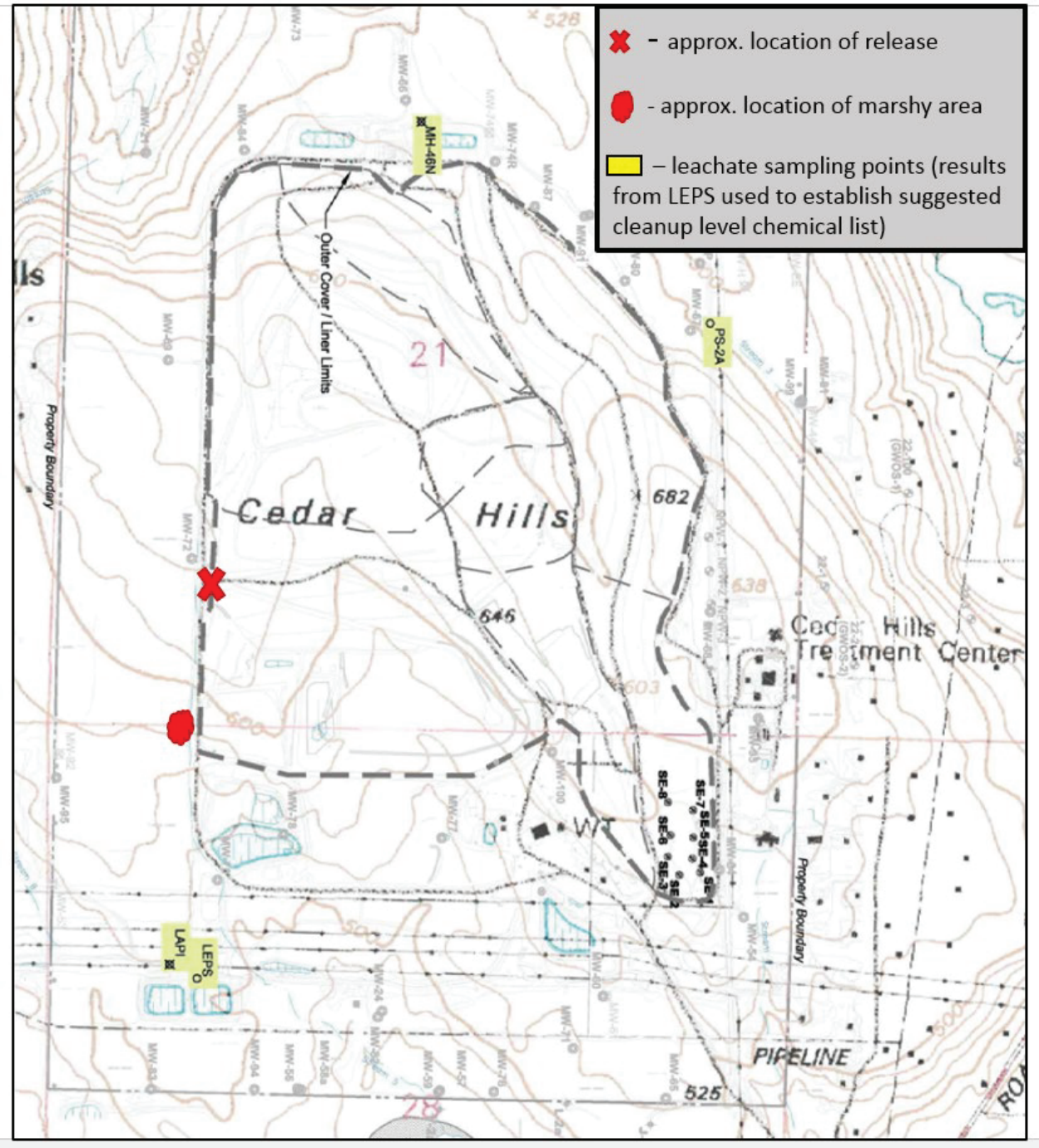


Figure 1. General layout of Cedar Hills landfill with areas of interest for this II noted. Base figure is the one listed under reviewed documents from the 2017 Annual Groundwater Report.

Additional or Supplemental Information from Observations Page (c)

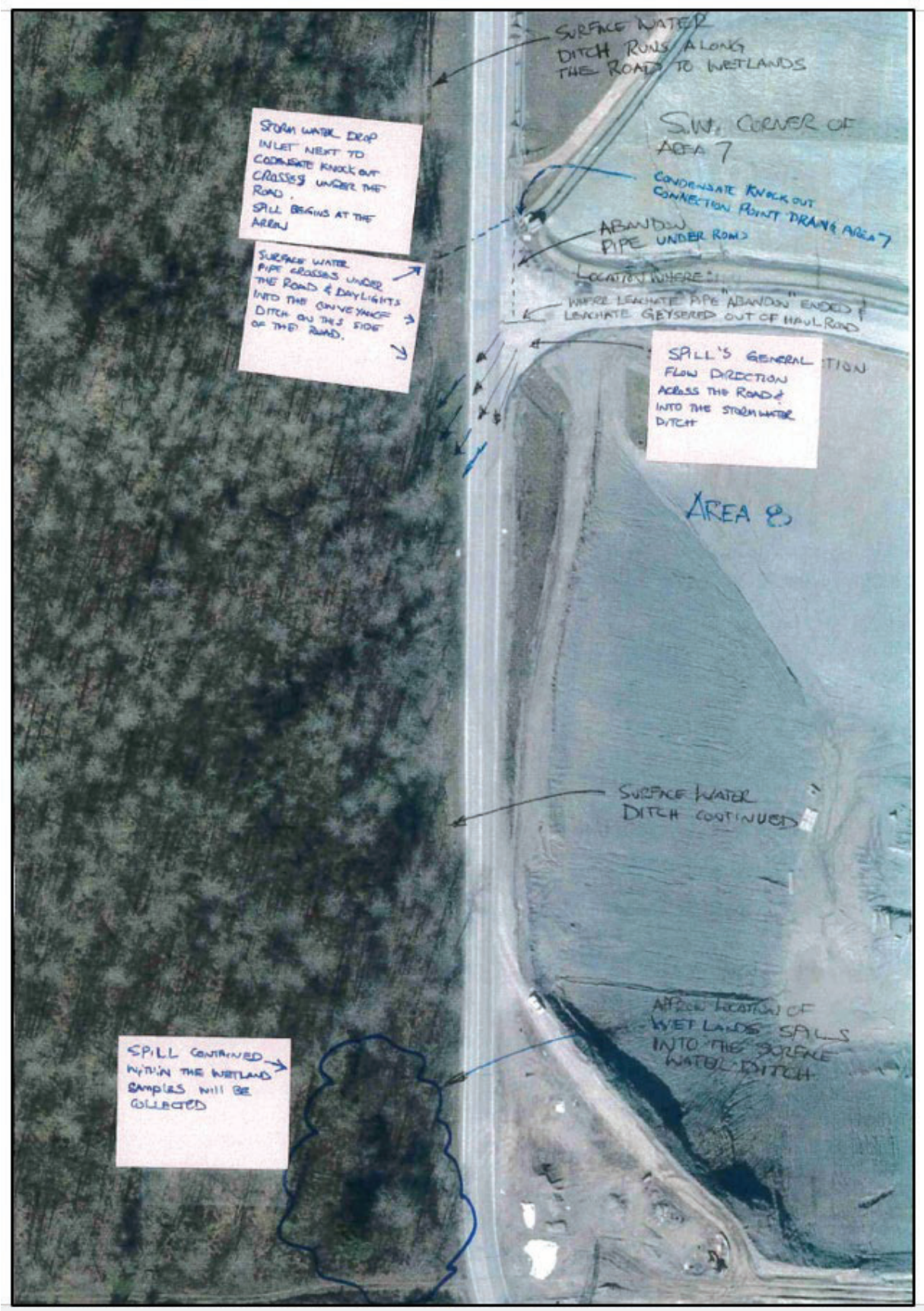


Figure 2. Details on the area of release and pathway it took to enter the marshy area.

Additional or Supplemental Information from Observations Page (d)

Figure 3. Photo of marshy area taken from adjacent road by the Investigator during the May 2019 visit.

Summary of the results of sample analysis and applicable sediment screening levels (CSLs for benthic community protection; from Table 8-1 in the Sediment Cleanup User's Manual (SCUM)). Concentrations are in mg/kg. Only chemicals for which there is an established CSL are included in the table. Per SCUM, if the average of the 3 highest concentrations of a chemical exceed the CSL, additional evaluation is needed to see if the area should be designated a cleanup site. The maximum concentration observed in any sample is included in this table; if this value is below the CSL, the calculated average will also be below the CSL.

CHEMICAL	MAX SAMPLE CONCENTRATION	SCREENING LEVEL
arsenic	11	120
chromium	53.7	88
copper	38.1	1200
DDT	<RL	8.1
lead	23.3	1300
nickel	61	110
PCBs	0.03	2.5
silver	0.13	1.7