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):	n/a
Parcel #(s):	3522069018
County:	King
FSID #:	19532
CSID #:	15125
UST #:	

SITE INFORMATION

Site Name (Name over door):	Site Address (including City, State and Zip):	Phone / Email
Reserve Silica Plant	28131 Black Diamond Ravensdale Rd SE Ravensdale, WA 98051	
Site Contact, Title, Business: Marisa Floyd, Vice President Reserve Silica Corporation	Site Contact Address (including City, State and Zip): 20 First Plaza Center NW, Suite 308 Albuquerque, NM 87102	Phone Email
Site Owner, Title, Business:	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): Alternate Site Name(s):	Additional Info (for any Site Information Item):	

Latitude (Decimal Degrees):	47.3470
Longitude (Decimal Degrees):	-121.9982

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:	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):

This site is being identified as a separate site from the Reserve Silica Reclamation site (CSID 4728, FSID 2041) located directly across Black Diamond-Ravensdale Road to the south. They are different sites due to different operations, different contaminants that are not comingled, different regulatory requirements, and a different mix of potentially liable parties

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

Concentrations of TPH, individual petroleum constituents, and arsenic in soil qualify the Reserve Silica Plant as a site.

Investigator: Priscilla Tomlinson Date Submitted: 12/24/2019

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.):

The Reserve Silica Plant site (the Site), is an approximately 52-acre, triangular-shaped property located north of Black Diamond-Ravensdale Road SE in the town of Ravensdale. Directly across the road to the south are the Reserve Silica Reclamation site, the location of coal mining, sand mining, and reclamation of mining pits with construction debris and cement kiln dust; and a property containing a mobile home and unknown commercial activities owned by Baja Properties of Enumclaw. North of the Site lie railroad tracks owned by BNSF. Across the tracks to the north are undeveloped parcels owned by King County Parks, one of which contains the 20-acre Ravensdale Lake. Southwest of the Site is another undeveloped property owned by King County Parks.

The Site was the location of an office, geotech soils lab, fueling area, 10,000-gallon underground storage tank (UST), transformer, truck wash, settling ponds, and sedimentation pond. A Phase I environmental site assessment conducted in 2014 listed the following recognized environmental conditions (RECs) that may still exist at the Site:

- Potential releases of gasoline, diesel, waste oil, antifreeze, and grease in the fueling area
- Potential releases of diesel from the UST.

Other RECs, including potential releases from the former laboratory building and potential migration of groundwater with elevated metals and pH from the Reserve Silica Reclamation site, were considered in a remedial investigation report written in 2017 and dismissed as not present.

A limited site assessment conducted in March and April 2017 included the following:

- Three borings in a hazardous material storage area, one completed as a monitoring well
- Three borings near the UST, one completed as a monitoring well
- Two monitoring wells located north of the road for assessing general groundwater quality
- One monitoring well in the southeast portion of the Wetland A/Former Settling Ponds area.

Seven soil samples were analyzed for TPH; benzene, toluene, ethylbenzene, and xylenes (BTEX); metals; and PAHs. Sample AB-2 (2.5 feet bgs) contained the maximum concentrations of TPH-D + TPH-O (4,600 mg/kg), naphthalene (63 mg/kg), and carcinogenic PAH toxicity equivalents (1.599 mg/kg), all of which exceed their Method A CULs. Sample AMW-5 (2.5 feet bgs) contained the maximum concentration of arsenic (21 mg/kg), which slightly exceeded the Method A CUL of 20 mg/kg.

Five groundwater samples were analyzed for TPH, BTEX, metals, PAHs, and conventional analytes. TPH, BTEX, and cPAHs were not detected. The maximum concentration of arsenic (5.1 ug/L in AMW-2) slightly exceeded the Method A CUL of 5 ug/L.

No investigation of surface water or sediment in Ravensdale Lake was performed. No investigation of materials in the settling and sedimentation ponds was performed and the investigation of soils and ground water below this area was limited.

Documents reviewed:

Phase I Environmental Site Assessment Report, King County Tax Parcel Nos. 3622069065, 0121069002, and 3522069018, Ravensdale, Washington. Fallon Consulting, LLC, Issaquah, WA. December 3, 2014.

Draft Remedial Investigation Report, Reserve Silica Ravensdale Site. Aspect Consulting, Seattle, WA. November 2017.

Summary of RI Data Gaps Investigation Results: Plant Site and Lower Haul Road, Reserve Silica, Ravensdale, WA. Aspect Consulting, Seattle, WA. May 8, 2019.

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)	C	S	S		S	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	B	B	S	S	S	Benzene
	Other Non-Halogenated Organics	B	B	S	S	S	TEX
	Petroleum Diesel	C	B	S		S	Petroleum Diesel
	Petroleum Gasoline	B					Petroleum Gasoline
	Petroleum Other	C	B	S	S	S	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)						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	B				Cr, Se, Ag, Ba, Cd
	Lead	B	B				Lead
	Mercury	B	B				Mercury
	Arsenic	C	C	S		S	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)

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 above 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: _____

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

Model Remedy Used? ☐
If yes, was this a transformer spill? ☐

Site Manager (Default: _____): _____

Specific confirmed contaminants include:

PAH, D, O, As in Soil

As in Groundwater

_____ in Other (specify matrix: _____)

Facility/Site ID No. (if known):
19532
Cleanup Site ID No. (if known):
15125

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.