

COPY



STATE OF WASHINGTON  
**DEPARTMENT OF ECOLOGY**

Southwest Region Office  
PO Box 47775 • Olympia, WA 98504-7775 • 360-407-6300

February 16, 2024

Reserve Silica Corporation  
c/o Doug Steding  
Northwest Resource Law PLLC  
71 Columbia St, Suite 325  
Seattle, WA 98104  
[dsteding@nwresource.com](mailto:dsteding@nwresource.com)

**Re: ERTS:** 724381  
**Location:** 28131 SE Ravensdale Way, Ravensdale WA (King County tax parcel 0121069010)

Dear Doug Steding:

In May 2023, the US Environmental Protection Agency (EPA) notified the Washington State Department of Ecology (Ecology) that soil had been removed from a property in Ruston which had been contaminated by the former Asarco Smelter in Ruston/North Tacoma. Reportedly, 33 truckloads of arsenic and lead contaminated soil were taken to and disposed of at the Reserve Silica (Reserve) Fill site, near the Reserve Silica Inert Waste Landfill in Ravensdale, Washington. The soil disposal occurred within an approximate 5.8-acre area of the property that had been cleared of trees and was being reclaimed with fill soil.

Reserve agreed to complete an independent study to determine the presence, nature and extent of arsenic and lead contaminated soil delivered to the Reserve Property. Ecology received your October 11, 2023, email with two attachments: Soil Investigation Report (Aspect, October 3, 2023) and Cleanup TM (Aspect, October 11, 2023). Ecology appreciates your initiative in pursuing this administrative option under the Model Toxics Control Act (MTCA).

Ecology's Toxics Cleanup Program (TCP) reviewed the reports. The reports document the soil characterization and soil management practice in the area where the arsenic and lead contaminated soil was placed. Approximately 500 cubic yards (cy) of contaminated soil were placed and mixed with approximately 49,500 cy of clean soil. This mixing with a very large volume of clean soil is a 100-fold dilution.

Characterization of the fill soil included 375 soil samples collected from 16 borings analyzed for arsenic and lead using an x-ray fluorescence (XRF) analyzer. Arsenic and lead were consistently detected by the XRF. All lead results were below the MTCA Method A cleanup level of 250 parts per million (ppm). For arsenic, less than 10% of the samples (7 of 375) were above the MTCA Method A cleanup level of 20 ppm. No samples had arsenic results more than two times the cleanup level (i.e., 40 ppm). The 95% upper confidence limit (UCL) is 8.5 ppm, less than the cleanup level. Arsenic and lead results are statistically in compliance with the MTCA Method A cleanup levels.

Based upon the information provided in the two technical memoranda, TCP has determined that there was a release or threatened release of a hazardous substance at the Reserve Property, but in TCP's judgement, does not pose a threat to human health or the environment. **Therefore, TCP is issuing the determination that no further action is necessary related to this release at this Site under Model Toxics Control Act, Ch. 70A.305 Revised Code of Washington (RCW).**

Please note that this no further action determination applies only to the area of the property affected by the release identified in ERTS #724381. It does not apply to any other release or potential release at the Site, any other areas on the property, nor any other properties owned or operated by Reserve Silica Corporation.

This determination does not preclude Reserve from complying with other Ecology or local jurisdiction requirements under other authorities, including but not limited to, performing monitoring to confirm the long-term effectiveness of the soil management actions.

Enclosed is the initial investigation report documenting TCP's determination. We appreciate your commitment to human health and the environment. If you have any questions about this determination, please contact me by phone at 360-489-4569 or by e-mail at [marian.abbett@ecy.wa.gov](mailto:marian.abbett@ecy.wa.gov)

Sincerely,



Marian L. Abbett, PE  
Unit Supervisor  
Toxics Cleanup Program  
Southwest Region Office

MA/at

Enclosure A: Initial Investigation Report

Reserve Silica

cc by email:

Reserve Silica Corporation: Vice President Marisa Floyd [mlfloyd@swcp.com](mailto:mlfloyd@swcp.com), Owner  
Frank Melfi Jr. [melfif@swcp.com](mailto:melfif@swcp.com), General Manager Fred White [fwhite@seanet.com](mailto:fwhite@seanet.com)  
Carla Brock, Aspect Consulting, LLC [cbrock@aspectconsulting.com](mailto:cbrock@aspectconsulting.com)  
Kristine Koch, EPA Cleanup Section #3 [Koch.kristine@epa.gov](mailto:Koch.kristine@epa.gov)  
Monika Kannadaguli, Ecology, Water Quality Program [mkan461@ecy.wa.gov](mailto:mkan461@ecy.wa.gov)  
Jay Fennell, Ecology, Water Quality Program [jfen461@ecy.wa.gov](mailto:jfen461@ecy.wa.gov)  
Chris Martin, Ecology, Water Quality Program [cmar461@ecy.wa.gov](mailto:cmar461@ecy.wa.gov)  
Donna Kirkman, Ecology, Toxics Cleanup Program [dmus461@ecy.wa.gov](mailto:dmus461@ecy.wa.gov)  
Diana Ison, Ecology, Toxics Cleanup Program [diso461@ecy.wa.gov](mailto:diso461@ecy.wa.gov)  
Dawn Maurer, Ecology, Solid Waste Management Program [dmau461@ecy.wa.gov](mailto:dmau461@ecy.wa.gov)  
Alan Noell, Ecology, Solid Waste Management Program [anoe461@ecy.wa.gov](mailto:anoe461@ecy.wa.gov)  
Tim O'Connor, Ecology, Solid Waste Management Program [tioc461@ecy.wa.gov](mailto:tioc461@ecy.wa.gov)  
Steven Williams, Ecology, Solid Waste Management Program [stwi461@ecy.wa.gov](mailto:stwi461@ecy.wa.gov)  
Yolanda Pon, King County, DPH/EHD [yolanda.pon@kingcounty.gov](mailto:yolanda.pon@kingcounty.gov)  
Jeromeo Cruz, King County, DPH/EHD [jercruz@kingcounty.gov](mailto:jercruz@kingcounty.gov)  
Warren Clauss, King County, DLS [wclauss@kingcounty.gov](mailto:wclauss@kingcounty.gov)  
Teddy Taddese, King County, DLS [teddy.taddese@kingcounty.gov](mailto:teddy.taddese@kingcounty.gov)  
Jeri Breazeal, King County, DLS [jeri.breazeal@kingcounty.gov](mailto:jeri.breazeal@kingcounty.gov)  
Tom Campbell, King County, DLS [tcampbell@kingcounty.gov](mailto:tcampbell@kingcounty.gov)  
Mark Rowe, King County, DLS [mrowe@kingcounty.gov](mailto:mrowe@kingcounty.gov)



DEPARTMENT OF  
**ECOLOGY**  
State of Washington

Check this box if you have two  
rattached any documents to  
this form (using the paperclip  
icon on the left).

**ERTS #(s):**

**724381**

**Parcel # (s):**

0121069010

**County:**

King

**FSID #:**

2041

**CSID #:**

16998

**UST #:**

Click to enter text.

**SITE INFORMATION**

<u>Site Name (Name over door):</u> <b>Reserve Silica Corporation</b>	<u>Site Address (including City, State, and Zip):</u> <b>28131 SE Ravensdale Way Ravensdale, WA</b>	<u>Phone</u> Click to enter text. <u>Email</u> Click to enter text.
<u>Site Contact, Title, Business:</u> <b>Doug Steding Northwest Resource Law PLLC</b>	<u>Site Contact Address (including City, State, and Zip):</u> <b>71 Columbia St, Suite 325 Seattle, WA 98104</b>	<u>Phone</u> <b>206-971-1567 (d) 206-217-1077 (c)</b> <u>Email</u> <b>dsteding@nwresource.com</b>
<u>Site Owner, Title Business:</u> Click to enter text.	<u>Site Owner Address (including City, State, and Zip):</u> Click to enter text.	<u>Phone</u> Click to enter text. <u>Email</u> Click to enter text.
<u>Site Owner Contact, Title, Business:</u> Click to enter text.	<u>Site Owner Contact Address (Including City, State, and Zip):</u> Click to enter text.	<u>Phone</u> Click to enter text. <u>Email</u> Click to enter text.
<u>Previous Site Owner(s):</u> Click to enter text.	<u>Additional Info (for any Site Information Item):</u> Click to enter text.	
<u>Alternate Site Name(s):</u> Click to enter text.		

Latitude (Decimal Degrees):	<b>47.343992</b>
Longitude (Decimal Degrees):	<b>-121.986294</b>

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

**INSPECTION INFORMATION**

Inspection Conducted? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Date/Time: Click to enter text.	Entry Notice: Announced <input type="checkbox"/> Unannounced <input type="checkbox"/>
Photographs taken? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Note: Attach photographs or upload to PIMS	
Samples Collected? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Note: Attach record with media, location, depth, etc.	

**RECOMMENDATION**

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

**COMPLAINT (Brief Summary of ERTS Complaint):**

33 truckloads of potentially contaminated soil was removed from a development parcel in Ruston WA, Pierce County, at the corner of Commercial and Baltimore. The soil is likely contaminated with arsenic, lead, and other heavy metals given the close proximity to the former Asarco smokestack, and the data that Asarco collected at this property many years ago.

The soil was illegally disposed of on the Reserve Silica Fill site, near the Reserve Silica Inert Waste Landfill, in Ravensdale WA, King County.

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

In May 2023, Reserve Silica Corporation (Reserve) received 33 truckloads of arsenic and lead contaminated soil from a property located at 5301 North Commercial Street in Ruston, Washington (Source Property). The Source Property was contaminated with arsenic and lead from the former Asarco Smelter located in Ruston/North Tacoma.

Aspect Consulting LLC (Aspect), on behalf of Reserve, completed an investigation of the inappropriate placement of contaminated soil at the Reserve Silica property as an independent action under Washington's Model Toxics Control Act (MTCA). Aspect submitted two technical memoranda to Ecology summarizing the investigation results.

- Soil Investigation Report (Aspect, October 3, 2023)
- Cleanup Technical Memorandum (Aspect, October 11, 2023)

In September 2023, Aspect completed 16 soil borings within the area of the Reserve Property where the arsenic and lead contaminated soil had been placed (Subject Area). Soil samples were collected from each boring in 1-foot intervals above 10 feet bgs and 6-inch intervals below 10 feet bgs and were field screened for arsenic and lead using an x-ray fluorescence (XRF) analyzer. A total of 375 soil samples were collected. Soil samples were periodically collected for laboratory analysis to confirm metals concentrations measured by the XRF.

Arsenic and lead were consistently detected by the XRF and most measurements were below the MTCA Method A cleanup levels of 20 mg/kg and 250 mg/kg, respectively. Arsenic was detected at concentrations slightly above the MTCA Method A cleanup level in three fill soil samples with concentrations ranging from 22 mg/kg to 38 mg/kg. Arsenic was also detected at concentrations slightly above the MTCA Method A cleanup level in four native soil samples with concentrations ranging from 21 mg/kg to 31 mg/kg. The other 368 samples detected arsenic less than the MTCA Method A cleanup level. No single sample was more than twice the cleanup level (i.e., 40 ppm). Less than 10% of the samples exceeded the cleanup level. And the 95% upper confidence limit (UCL) is 8.5 ppm which is less than the cleanup level.

Lead was not detected above the MTCA Method A cleanup level in any soil samples.

The October 11, 2023 technical memorandum documents the soil management that occurred in the Subject Area. Approximately 50,000 cy of soil was placed in the Subject Area. One percent of this volume (500 cy) was the arsenic and lead contaminated soils. The other 99 percent of import soils are assumed to be clean fill. The placement method of the import fill, grading out over a large area, appears to have diluted the arsenic and lead contaminated soil.

Ecology published the Tacoma Smelter Plume Model Remedies Guidance with cleanup options for Tacoma Smelter Plume (TSP) contamination. TSP contamination is arsenic and lead in surface soil from the deposition of air pollution from the former Asarco smelter. The guidance is only for the TSP arsenic and lead contamination. One of the model remedies is dilution through mixing and grading. The October 11 technical memorandum presents an argument that the mixing and grading in the Subject Area utilized this model remedy. As the potential for arsenic and lead contaminated soil in the Subject Area was due to placement of contaminated soil, not deposition of air pollution from the Asarco smelter, the use of the model remedy is not appropriate.

While use of the TSP model remedy of mixing is not appropriate, nonetheless, the sampling results and soil management of mixing demonstrate that the arsenic and lead contaminated soil cannot be located in the Subject Area. Arsenic and lead results are statistically in compliance with the MTCA Method A cleanup levels.

Recommendation – under MTCA, a release of a hazardous substance has occurred, but does not pose a threat to human health or the environment. No further action is required under MTCA.

Investigator: **Marian L. Abbett, PE**

Date Submitted: 1/2/2024

**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):

Click to enter text.

Documents reviewed:

Click to enter text.

CONTAMINANT GROUP	CONTAMINANT	SOIL	GROUNDWATER	SURFACE WATER	AIR	SEDIMENT	DESCRIPTION
Non-Halogenated Organics	Phenolic Compounds	Select	Select	Select		Select	Compounds containing phenols (Examples: phenol; 4-methylphenol; 2-methylphenol)
	Non-Halogenated Solvents	Select	Select	Select	Select	Select	Organic solvents, typically volatile or semi-volatile, not containing any halogens. To determine if a product has halogens, search HSDB ( <a href="http://toxnet.nlm.nih.gov/cgi-bin/sis/htmlgen?HSDB">http://toxnet.nlm.nih.gov/cgi-bin/sis/htmlgen?HSDB</a> ) 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). <i>Use this when TEX contaminants are present independently of gasoline.</i>
	Polynuclear Aromatic Hydrocarbons (PAH)	Select	Select	Select	Select	Select	Hydrocarbons composed of two or more benzene rings.
	Tributyltin	Select	Select	Select		Select	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	Select	Select	Select	Select	Select	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	Select	Select	Select	Select	Select	Benzene
	Other Non-Halogenated Organics	Select	Select	Select	Select	Select	TEX
	Petroleum Diesel	Select	Select	Select		Select	Petroleum Diesel
	Petroleum Gasoline	Select	Select	Select	Select	Select	Petroleum Gasoline
	Petroleum Other	Select	Select	Select		Select	Oil-range organics
Halogenated Organics (see notes at bottom)	PBDE	Select	Select	Select	Select	Select	Polybrominated di-phenyl ether
	Other Halogenated Organics	Select	Select	Select	Select	Select	Other organic compounds with halogens (chlorine, fluorine, bromine, iodine). search HSDB ( <a href="http://toxnet.nlm.nih.gov/cgi-bin/sis/htmlgen?HSDB">http://toxnet.nlm.nih.gov/cgi-bin/sis/htmlgen?HSDB</a> ) 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	Select	Select	Select	Select	Select	PCE, chloroform, EDB, EDC, MTBE
	Polychlorinated Biphenyls (PCB)	Select	Select	Select	Select	Select	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)	Select	Select	Select	Select	Select	A family of more than 70 compounds of chlorinated dioxins or furans. (Examples: Dioxin; Furan; Dioxin TEQ; PCDD; PCDF; TCDD; TCDF; OCDD; OCDF). <i>Do not use for 'dibenzofuran', which is a non-chlorinated compound that is detected using the semivolatile organics analysis 8270</i>
Metals	Metals – Other	Select	Select	Select		Select	Cr, Se, Ag, Ba, Cd
	Lead	<b>B</b>	Select	Select		Select	Lead
	Mercury	Select	Select	Select	Select	Select	Mercury
	Arsenic	<b>B</b>	Select	Select		Select	Arsenic
Pesticides	Non-halogenated pesticides	Select	Select	Select	Select	Select	Pesticides without halogens (Examples: parathion, malathion, diazinon, phosmet, carbaryl (sevin), fenoxycarb, aldicarb)
	Halogenated pesticides	Select	Select	Select	Select	Select	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	Select	Select	Select	Select	Select	Wastes that emit more than background levels of radiation.
	Conventional Contaminants, Organic	Select	Select	Select		Select	Unspecified organic matter that imposes an oxygen demand during its decomposition (Example: Total Organic Carbon)
	Conventional Contaminants, Inorganic	Select	Select	Select	Select	Select	Non-metallic inorganic substances or indicator parameters that may indicate the existence of contamination if present at unusual levels (Examples: Sulfides, ammonia)
	Asbestos	Select	Select	Select	Select	Select	All forms of Asbestos. Asbestos fibers have been used in products such as building materials, friction products and heat-resistant materials.
	Other Deleterious Substances	Select	Select	Select		Select	Other contaminants or substances that cause subtle or unexpected harm to sediments (Examples: Wood debris; garbage (e.g., dumped in sediments))
	Benthic Failures	Select	Select	Select		Select	Failures of the benthic analysis standards from the Sediment Management Standards.
	Bioassay Failures	Select	Select	Select		Select	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	Select	Select	Select	Select	Select	Weapons that failed to detonate or discarded shells containing volatile material.
	Other Reactive Wastes	Select	Select	Select	Select	Select	Other Reactive Wastes (Examples: phosphorous, lithium metal, sodium metal)
	Corrosive Wastes	Select	Select	Select	Select	Select	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 (Date Report Received)  
 ERTS Complaint  
 Other (please explain): [Click to enter text.](#)

Does an Early Notice Letter need to be sent:  Yes  No  
If No, please explain why: [Click to enter text.](#)

NAICS Code (if known): [Click to enter text.](#)  
Otherwise, briefly explain how property is/was used (i.e., gas station, dry cleaner, paint shop, vacant land, etc.):  
[Click to enter text.](#)

Site Unit(s) to be created (Unit Type):  Upland (includes VCP & LUST)  Sediment  
If multiple Unites needed, please explain why: [Click to enter text.](#)

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 **Model Remedy Used?**   
 Cleanup Started  Cleanup Complete – Active O&M/Monitoring **If yes, was this a**  
 No Further Action Required **transformer spill?**

Site Manager (Default [Click to enter text.](#)) [Click to enter text.](#)

Specific confirmed contaminants include: **Facility/Site ID No. (if known):**  
[Click to enter text.](#) in Soil [Click to enter text.](#)  
[Click to enter text.](#) in Groundwater **Cleanup Site ID No. (if known):**  
[Click to enter text.](#) in Other (specify matrix: [Choose an item.](#)) [Click to enter text.](#)

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 for Observations Page**

Please use this box for any text that requires special formatting

[Click to enter text.](#)