



Department
of Health



Department of
Environmental
Conservation

Frequently Asked Questions Dzus Fasteners Co., Inc. Site West Islip, Suffolk County Site #152033

Overview

What are cadmium and chromium?

Cadmium and chromium are natural elements in the earth's crust. Soils and rocks contain some cadmium and chromium. Most cadmium and chromium used in the United States is extracted during the production of other metals like zinc, lead, and copper. Cadmium and chromium do not corrode easily and have many uses, including batteries, pigments, metal coatings, and plastics.

What kinds of environmental samples have been collected to date? What was the purpose of taking the samples?

Several types of environmental samples were collected at the site including soil, sediment, surface water, groundwater, and biological samples (fish, crabs, and clams). Environmental samples were collected to look for the presence or absence of contaminant concentrations and to aid in remedial design development.

The soil and sediment sampling had three general purposes:

- 1) To examine the nature and extent of site contaminants,
- 2) To determine if contaminant levels in exceed the applicable New York State soil cleanup objectives (SCOs), and sediment guidance values (SGVs), and
- 3) To inform decisions regarding remediation and disposal of contaminated media.

Soil samples were targeted for depths where people are most likely to come in contact with soil through activities like yard work or play (zero to two inches below ground surface), and deeper soils where people would contact while digging below the surface, such as when planting a tree, gardening, or making home improvements (2-24"). Sediment samples were collected in Willetts Creek and Lake Capri to determine the extent of contamination identified during previous sampling activities. Groundwater samples were collected to evaluate if the contaminants are getting into groundwater within the study area. Fish samples were collected to evaluate ecological and human health risks to ingesting fish in Lake Capri.

What is the status of Operable Unit 6, the former Dzus Fastener site?

The Federal Resource and Recovery Act (RCRA) Closure requirements were recently completed and the property is now considered suitable for redevelopment. There has been developer interest to redevelop the parcel but nothing has been finalized.

What is the extent of offsite contamination?

The onsite area is the 1-acre space that once contained the source area associated with the Dzus Fastener Site (Operable Unit 1). Offsite contamination located within and around Willetts Creek and Lake Capri is being addressed by this remediation project. The Remedial Investigation for the tidal area of Willetts Creek is ongoing. A separate operable unit is being established for that area.

What is meant by hazardous waste?

The term hazardous waste is a regulatory designation. In New York State, hazardous wastes are defined by U.S. Environmental Protection Agency and NYSDEC regulations (see <http://www.dec.ny.gov/chemical/100401.html>). Simply defined, a hazardous waste is a waste with properties that make it dangerous or capable of having a harmful effect on human health or the environment. Hazardous waste is generated from many sources, ranging from industrial manufacturing process wastes to batteries and may come in many forms, including liquids, solids gases, and sludges.

Site Remediation

What is the schedule for completing the cleanup on the middle school property, the high school property, and Lake Capri?

Construction is currently anticipated to begin in spring 2019. It is likely that the Middle School and High School areas of Willetts Creek will be remediated first followed by Lake Capri.

What is a temporary fabric structure and what is its purpose?

A temporary fabric structure is a large fabric and frame structure where contaminated sediment can be handled (processed) under an area isolated from the outside environment to control dust and odors. As the sediments are removed from the creek or lake they may be moved to a sprung structure. The structure also contains an air filtration system, which controls odors, dust, and other nuisances from leaving the site. Inside the sprung structure, sediment may be dewatered and then processed for shipment to a NYSDEC approved landfill for disposal.

How are the sediments dewatered prior to transportation and disposal?

Creek sediments may be positioned or staged in an elevated location or pile so that water will trickle out of the material through gravity and be collected for treatment. To continue the drying process prior to sediment transport, bulking agents such as cement may be added to the sediments. Water may be removed from the lake sediments using specialized equipment such as a filter press to speed up the dewatering process.

How is the water from the dewatered sediments filtered and disposed?

Water from the sediments can be processed through a temporary onsite wastewater treatment system and then discharged downstream of the work area in accordance with a State Pollutant Discharge Elimination System (SPDES) Equivalency Permit. During treatment, incoming and outgoing water is sampled and analyzed to ensure that the discharged water meets the requirements of the equivalency permit. The temporary treatment system will depend on the contaminants present in the water and may consist of a series of filters, activated carbon, chemical process, or a combination of processes.

Where will the dewatered sediments be disposed?

Dewatered sediments will be disposed of at a permitted landfill.

How does NYSDEC know the remediation is complete?

The remedial project is determined complete based on meeting goals described in the Record of Decision and the remedial design documents. The objective of this cleanup is to dredge sediment to native sand and to excavate soil until the SCOs are met.

Will NYSDEC provide full time oversight?

Yes, during the cleanup a full-time construction inspector will be onsite as a representative of the NYSDEC. The construction inspector will oversee implementation of the health and safety plan, review planned activities, and respond to community questions through a dedicated telephone number. Additional dedicated personnel may likely be in place during specific work activities to provide noise or vibration monitoring, air monitoring, and independent oversight inspections.

How will the lake and creek be restored?

Dredged areas of Lake Capri will be backfilled with clean material. Excavated areas of Willetts Creek will be backfilled and wetlands restored per approved restoration designs. Residential yards will be restored with topsoil, plantings, and grass seed and restored to a condition similar to existing conditions to the extent feasible.

How will trash in the creek, which typically ends up in the lake, be handled during and after remediation?

During the cleanup, within the remediation area, NYSDEC will collect and consolidate trash and general refuse for offsite disposal or recycling. Following remediation, the Town and/or landowners will be responsible for the cleanup of future trash accumulation in the creek since it is not related to the remediation activities.

Public Outreach

How will the school and community be kept informed?

Information during the cleanup will be relayed through a dedicated project website and local alert systems. Cleanup progress, work locations, traffic changes, and anticipated activities may be posted to keep an open dialogue with the community. A public availability session will be held prior to the start of construction.

Health Related Questions

How can I be exposed to contaminants in soil, sediment, or fish?

People can be exposed to soil contaminants if they get soil or sediment particles on their hands and ingest the soil through hand-to-mouth activity, or by eating vegetables grown in contaminated soil. Young children have the greatest potential for exposure to soil contaminants because they often come into direct contact with the soil while playing or digging in the dirt, and may swallow the soil after putting their fingers, hands, or toys in their mouths.

Exposure may also occur by ingesting fish caught in Lake Capri. According to the Long Island Region Fish Advisories published by the NYSDOH, women under 50 and children under 15 should not eat any fish from Lake Capri. Men over 15, and women over 50 are advised to not eat more than 1 meal per month of American eel or carp, and not more than 4 meals per month of all other fish.

What are soil cleanup objectives or “SCOs”?

SCOs are contaminant-specific soil concentrations that are protective of public health and the environment for specified uses of a property (e.g., residential, commercial). SCOs are set at a soil level at which health effects are unlikely to occur and are used, along with other considerations, to guide decisions about the need to reduce exposure to environmental contaminants. The SCOs are contained in NYSDEC’s Environmental Remediation Program regulations (see <http://www.dec.ny.gov/chemical/34189.html>).

What are Sediment Guidance Values or “SGVs”?

SGVs are contaminant-specific sediment concentrations used in New York State to classify sediment based on the potential for adverse impacts to aquatic life. The SGVs are divided into three classes (Class A, Class B, and Class C). Each class represents a contaminant concentration range to provide screening levels regarding the potential risk posed to aquatic life. The SGVs are contained in NYSDEC’s Division of Fish and Wildlife guidance document “Screening and Assessment of Contaminated Sediment” (see <https://www.dec.ny.gov/regulations/28693.html>).

How are the soil sampling results for my property evaluated?

The soil sampling results for the residential properties are evaluated by comparing them to the residential SCOs. The residential SCOs are set at a soil level at which health effects are unlikely to occur and assume exposure occurs through activities that typically occur on residential properties (e.g., working and playing in the yard, gardening).

The residential SCOs for the primary site-related contaminants are 2.5 parts per million (ppm) for cadmium, and 36 ppm for chromium. The SCOs are used as a tool, along with other considerations, to guide decisions about the need to reduce exposure to environmental contaminants.

How are sediment sampling results within the creek and lake evaluated?

The sediment sample results are evaluated by comparing them to the lower level of Class B SGVs, which would meet the Class A SGVs. Class A sediments are considered to be of low risk to aquatic life.

What does it mean if cadmium and/or chromium was found on my property above the SCOs?

An SCO is not a "bright line" between soil concentrations that will result in health effects and those that will not. Moreover, exceedance of an SCO at your property does not represent an immediate health hazard but indicates a need to evaluate measures to reduce the contaminant levels. The degree of public health concern when an SCO is exceeded depends on several factors, including (among others) the extent to which the SCO is exceeded, the potential for human exposure, other sources of exposure to the chemical, and the strength and quality of the available toxicological information on the chemical.

What does it mean if cadmium and/or chromium was detected in the creek or lake above the SGVs?

An SGV is a screening tool used to identify potential risk to aquatic life. They provide a starting point for the risk assessment process. There is a high variability in the concentration of contaminants in sediment that cause toxicity. The degree of toxicity to the aquatic environment can change due to sediment, water, and contaminant characteristics. An exceedance of an SGV does not represent an immediate hazardous aquatic environment, but a need to conduct further investigation to evaluate the effects of the contamination on the surrounding environment.

Will my children get sick if they play in my yard? What measures should I take to protect them?

We do not expect there to be any immediate health effects from exposure to cadmium or chromium, or other contaminants in the soil through typical use of the yards. However, you can reduce the chances for exposure to these contaminants by taking reasonable and practical steps to minimize direct and repeated contact with bare soils (particularly by young children). Maintenance of a grass or mulch cover will help prevent direct contact with the soil. Unnecessary digging in the dirt should be avoided, and children and adults should wash hands after outdoor activities. The use of doormats and periodic damp mopping of floors can help reduce exposure to outdoor soil that might be tracked indoors. It's important to note that all soils contain metals and microorganisms, and therefore it is always a good idea to minimize getting soil into the body whether it is contaminated or not.

Can I plant a garden? Should I eat vegetables grown in my garden?

Until properties are cleaned up or found not to need remedial work, eating vegetables from your garden could increase your exposure to cadmium, chromium, or other contaminants if they are present at elevated levels in the soil of your garden. Contaminant levels in homegrown vegetables depend on many factors such as the specific kind of vegetable, characteristics of the soil, the level of contamination in the soil, and others. Additionally, soil can stick to vegetables and then be taken into the body when the vegetables are eaten. If you decide to grow and eat vegetables, here are some steps to consider to help reduce exposures:

- Grow vegetables in raised beds with clean soil (at least 10 inches deep). Use untreated wood to make the beds. Pressure-treated wood and railroad ties contain added chemicals.
- Wear gloves when working in the garden.
- Brush off your clothes and remove shoes and gloves before entering your home.
- Wash with soap and water after gardening or any time before you eat.

- Additional information about healthy gardening may be found at:
<http://www.health.ny.gov/publications/1301/>.

What health effects can be caused by exposure to cadmium and chromium?

All chemicals can cause health effects. The risk for adverse health effects from exposure to any chemical depends on the chemical's toxicity, the amount of the chemical to which a person is exposed, and how long and how often the exposure occurs. Below is some general information about the kinds of health effects that are associated with cadmium and chromium.

There is some evidence that cadmium causes cancer in rats exposed to high levels in their drinking water over their lifetime. Some people exposed to large amounts of cadmium had kidney and bone damage. Exposure to high levels of cadmium damages the kidneys, blood, liver, heart, and the immune and nervous systems of laboratory animals. High exposure also damages the unborn offspring of laboratory animals exposed during pregnancy.

There are two main species of chromium, trivalent and hexavalent. Trivalent chromium is the type of chromium that has been identified at the site. Hexavalent chromium is a known human carcinogen but has not been identified at the site.

Should my children or I be tested for cadmium or chromium?

These metals are common in the environment and it is not unusual to find detectable levels of cadmium or chromium in a person's body (e.g., in a blood or urine sample). However, while testing can measure the amount of these metals in a person's body, the test cannot identify where the metal came from. If you are interested in being tested for these chemicals, you should consult your health care professional.

For More Information

Where can I find more information?

Project documents are available at the following location to help the public stay informed:

West Islip Public Library
Attn: Donna MacGilvray
3 Higbie Lane, West Islip, NY 11795
(631) 661-7080
dmacgilvray@westisliplibrary.org

The NYSDEC maintains a web page with additional information:

<https://www.dec.ny.gov/chemical/114710.html>

NYSDEC and NYSDOH staff are always available to provide updates, or answer any questions community members or faculty have.

For project investigation-related questions, please contact:

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For health-related project questions, please contact:

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How do I stay informed?

NYSDEC and NYSDOH will continue to keep the public informed as this work progresses and as development of cleanup plans are finalized. Sign up for the contaminated sites county email listserv to receive site-related information and announcements for all contaminated sites in the county. Sign up for the listserv is available at the following web page: <http://www.dec.ny.gov/chemical/61092.html>