Periodic Review
Spokane County Sewer Operations Center

12107 E Empire Way, Spokane Valley, Spokane County
Facility Site ID: 11518, Cleanup Site ID: 12444

Toxics Cleanup Program, Eastern Region

Washington State Department of Ecology
Spokane, Washington

August 2024

Document Information

This document is available on the Department of Ecology's Spokane County Sewer Operations Center cleanup site page.[1]

Related Information

- Facility Site ID: 11518
- Cleanup Site ID: 12444

Contact Information

Toxics Cleanup Program[2]

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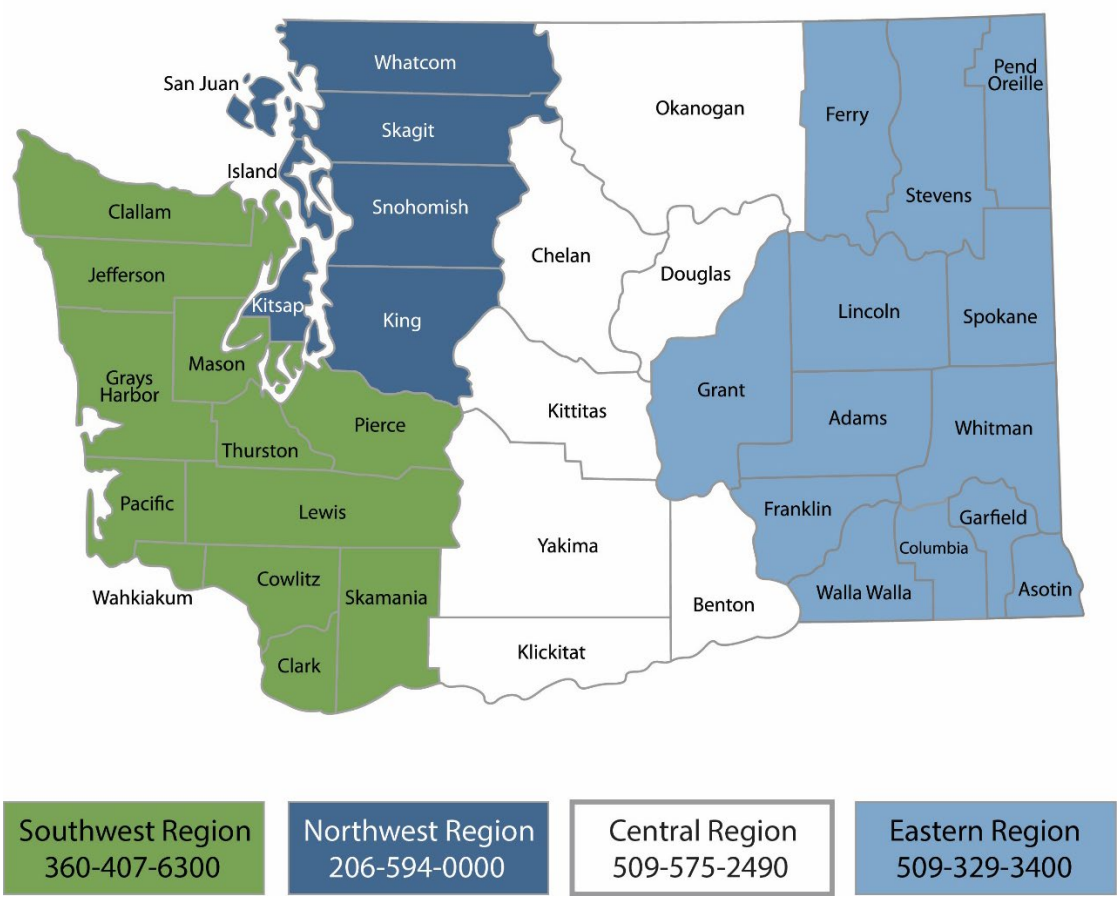
[1] https://apps.ecology.wa.gov/cleanupsearch/site/12444
[2] https://ecology.wa.gov/About-us/Who-we-are/Our-Programs/Toxics-Cleanup
[3] https://ecology.wa.gov/About-us/Accountability-transparency/Our-website/Accessibility

Department of Ecology's Regional Offices

Map of Counties Served



Region	Counties served	Mailing Address	Phone
Southwest	Clallam, Clark, Cowlitz, Grays Harbor, Jefferson, Mason, Lewis, Pacific, Pierce, Skamania, Thurston, Wahkiakum	PO Box 47775 Olympia, WA 98504	360-407-6300
Northwest	Island, King, Kitsap, San Juan, Skagit, Snohomish, Whatcom	PO Box 330316 Shoreline, WA 98133	206-594-0000
Central	Benton, Chelan, Douglas, Kittitas, Klickitat, Okanogan, Yakima	1250 W Alder St Union Gap, WA 98903	509-575-2490
Eastern	Adams, Asotin, Columbia, Ferry, Franklin, Garfield, Grant, Lincoln, Pend Oreille, Spokane, Stevens, Walla Walla, Whitman	4601 N Monroe Spokane, WA 99205	509-329-3400
Headquarters	Across Washington	PO Box 47600 Olympia, WA 98504	360-407-6000

Table of Contents

Introduction

The Washington Department of Ecology (Ecology) reviewed post-cleanup site conditions and monitoring data to ensure human health and the environment are being protected at the Spokane County Sewer Operations Center cleanup site (Site). Site cleanup was implemented under the Model Toxics Control Act (MTCA) regulations, Chapter 173-340 Washington Administrative Code (WAC). This is the first periodic review conducted for this Site.

Cleanup activities at this Site were completed under an independent remedial action. Residual concentrations of arsenic in soil exceeding MTCA cleanup levels remain on the property. The MTCA cleanup levels for soil and groundwater are established under WAC 173-340-740[4] and WAC 173-340-720,[5] respectively.

Ecology determined institutional controls in the form of an environmental covenant would be required as part of the cleanup action for the Site. WAC 173-340-420(2)[6] requires Ecology to conduct a periodic review of certain sites every five years. For this Site, a periodic review is required because Ecology issued a no further action (NFA) opinion at the Site and institutional controls were required as part of the cleanup action.

When evaluating whether human health and the environment are being protected, Ecology must consider the following factors (WAC 173-340-420(4)):

a) The effectiveness of ongoing or completed cleanup actions, including the effectiveness of engineered controls and institutional controls in limiting exposure to hazardous substances remaining at the site

b) New scientific information for individual hazardous substances or mixtures present at the site

c) New applicable state and federal laws for hazardous substances present at the site

d) Current and projected site and resource uses

e) The availability and practicability of more permanent remedies

f) The availability of improved analytical techniques to evaluate compliance with cleanup levels

[4] https://app.leg.wa.gov/WAC/default.aspx?cite=173-340-740
[5] https://app.leg.wa.gov/WAC/default.aspx?cite=173-340-720
[6] https://app.leg.wa.gov/wac/default.aspx?cite=173-340-420

Summary of Site Conditions

Site description and history

The Site is in a light industrial area of Spokane Valley on Spokane County tax parcel 45044.0117. The 3.52-acre property is bounded on the east by the Irvin Water District No. 6, to the west by the Empire Industrial Park, and to the south by East Empire Way and residential properties.

The vacant property to the north is owned by Holcim (US) Inc. and was operated as a cement manufacturing plant from 1910 through 1967 and used as a cement distribution terminal from 1967 until 2002. Cement kiln dust (CKD), a by-product of the cement manufacturing process, was deposited on the Holcim property during facility operations. The Holcim property is listed by Ecology under cleanup site ID 4580 and was cleaned up in accordance with Agreed Order 8549.

The Spokane County Sewer Operations Center Site was undeveloped until it was purchased by Spokane County Environmental Services (formerly Spokane County Utilities) in 1997. The Wastewater Operations Center offices and shop were constructed in 2000. The Site is mostly covered in structures and asphalt pavement with some gravel areas on the northern third. The Site is used for storage, maintenance, and repair of sewer equipment as well as vehicle storage.

A vicinity map is in Appendix A, and a Site plan is in Appendix B.

Site investigations

In 2007, Spokane County proposed to install a sewer line across the Site and contacted Holcim Inc. to acquire an easement from the Holcim property bordering the Site to the north (parcel 45046.9067). Holcim disclosed that arsenic-contaminated soils were present on their property due to CKD deposition, which prompted Spokane County to investigate the northern portion of the Site.

From July through November 2007, soil samples were collected from 8 test pits extending to 10 feet below ground surface (bgs). All samples were analyzed for total arsenic. Analytical results indicated arsenic exceeded the MTCA Method A cleanup level in samples collected from 1 foot bgs in test pits TP-1, TP-5, TP-7, and TP-8. A sample collected at 10 feet bgs in test pit TP-1 also exceeded the cleanup level. Arsenic concentrations in the four test pits exceeding cleanup levels ranged from 20.7 to 180 milligram per kilogram (mg/kg). In November 2007, three additional soil samples were collected from the base of the sewer line excavation at approximately 18 feet bgs. One sample collected in the trench near TP-2 exceeded the cleanup level.

From June through July 2014, additional test pits SP-1 through SP-21 were excavated to 4 feet bgs near the prior test pit locations to further delineate the extent of arsenic in soil. Soil samples were collected at 1-foot increments and analyzed for total arsenic; two samples were also analyzed for cadmium, chromium, lead, mercury, and zinc. One composite sample was also

collected from the soil stockpiles and analyzed for polychlorinated biphenyls (PCBs) and heavy metals using the toxicity characteristic leaching procedure (TCLP). Results indicated arsenic contamination in multiple areas with concentrations up to 188 mg/kg. Other metals and PCBs were not present above cleanup levels, and the TCLP analysis indicated no leachable metals were present.

Cleanup actions

In 2014, Spokane County entered Ecology's Voluntary Cleanup Program and submitted a Cleanup Action Plan (CAP) consisting of a full removal action for all arsenic-contaminated soils.

In early 2015, the Irvin Water District No. 6 excavated a pipeline east of the Site and discovered two subsurface belt lines encased in thick concrete tunnels at approximately 2 feet bgs. The east-west trending tunnels appeared to extend onto the Site and would prevent excavation and removal as proposed in the CAP.

Other remedial alternatives were evaluated, and a revised CAP was submitted in April 2015 detailing containment of the impacted soil to prevent direct contact or ingestion, and institutional controls to prohibit activities that would interfere with the remedial actions or result in exposure to hazardous substances.

During the summer of 2016, a low-permeability cap consisting of 4–8 inches of compacted gravel and 3 inches of asphalt was installed extending beyond the identified boundary of contaminated soil. The asphalt surface was graded to allow for stormwater drainage to the south toward a landscaped drainage swale.

Because contaminated soil remains at the Site at concentrations exceeding MTCA Method A cleanup levels, Ecology determined institutional controls would be required to prevent exposure to arsenic in soils. An environmental covenant was recorded with Spokane County in November 2018, and a Site NFA was issued by Ecology on January 8, 2019.

Cleanup standards

Cleanup standards include cleanup levels, the location where these cleanup levels must be met (point of compliance), and any other regulatory requirements that apply to the Site. WAC 173-340-704[7] states MTCA Method A may be used to establish cleanup levels at sites that have few hazardous substances, are undergoing a routine cleanup action, and where numerical standards are available for all indicator hazardous substances in the media for which the Method A cleanup level is being used. Method B may be used at any site and is the most common method for setting cleanup levels when sites are contaminated with substances not

[7] https://app.leg.wa.gov/WAC/default.aspx?cite=173-340-704

listed under Method A. Method C cleanup levels may be used to set soil and air cleanup levels at industrial sites.

MTCA Method A cleanup levels for unrestricted land use were determined to be appropriate for contaminants at this Site. The cleanup actions conducted at the Site were determined to be routine, few hazardous substances were found at the Site, and numerical standards were available in the MTCA Method A table for each hazardous substance. Table 1 contains the MTCA soil cleanup level for the Site.

Table 1. MTCA soil cleanup level

Analyte	MTCA Method A soil cleanup level (mg/kg)
Arsenic	20

mg/kg = milligrams per kilogram
MTCA = Model Toxics Control Act

The point of compliance is the area where the cleanup levels must be attained. For soil cleanup levels based on the protection of groundwater, as they are for this Site, the point of compliance is established as soils throughout the Site. This is the standard point of compliance.

Environmental Covenant

Ecology determined institutional controls would be required as part of the cleanup action to document the remaining contamination, protect the cleanup action, and protect human health and the environment. On November 6, 2018, institutional controls in the form of an environmental covenant[8] (Covenant) were recorded for the Site in Spokane County under recording number 6758082.

In addition to general restrictions and requirements that prohibit interfering with the remedial action, the Covenant recorded for the Site imposes the following limitations:

> a. Containment of Soil.
>
> The remedial action for the Property is based on containing contaminated soil under a cap
>
> consisting of three inches of hot mix asphalt, Class A (PG 64-28) over a layer of crushed surfacing top course, six inches minimum depth to 24 inches maximum depth and located as illustrated in Exhibit C. The primary purpose of this cap is to minimize the potential for human contact with contaminated soil; minimize leaching of contaminants to groundwater and surface water; prevent runoff from contacting contaminated soil; minimize airborne contaminants. As such, the following restrictions shall apply within the area illustrated in Exhibit C.

[8] https://apps.ecology.wa.gov/cleanupsearch/document/78384

Any activity on the Property that will compromise the integrity of the cap including: drilling;

digging; piercing the cap with sampling device, post, stake or similar device; grading; excavation; installation of underground utilities; removal of the cap; or, application of loads in excess of the cap load bearing capacity, is prohibited without prior written approval by Ecology. The Grantor shall report to Ecology within forty-eight (48) hours of the discovery of any damage to the cap. Unless an alternative plan has been approved by Ecology in writing, the Grantor shall promptly repair the damage and submit a report documenting this work to Ecology within thirty (30) days of completing the repairs.

The Grantor covenants and agrees that it shall annually, or at another time as approved in writing by Ecology, inspect the cap and report within thirty (30) days of the inspection the condition of the cap and any changes to the cap that would impair its performance.

The Covenant also includes requirements for granting Ecology access to the Site and providing written notice when conveying interest in any part of the property.

Periodic Review

Effectiveness of completed cleanup actions

During the Site visit conducted on February 8, 2024, Ecology observed the Site use was protective of the cleanup actions and consistent with the limitations of the Covenant. The Site continues to be occupied by the Spokane County Sewer Operations Center and contains vehicles and equipment used for maintaining municipal sewer services. The Site has landscaping, asphalt, and concrete surfaces throughout. These surfaces are in excellent condition with no signs of significant degradation. Small surface cracks in the asphalt cap were sealed by Spokane County staff and reported during annual inspection reports submitted to Ecology. A photo log is in Appendix C.

Direct contact

The cleanup actions were intended to eliminate exposure to contaminated soil at the Site, which contains arsenic exceeding MTCA Method A cleanup levels. Exposure pathways to contaminated soils by ingestion, inhalation, and direct contact were reduced by an engineered cap including gravel and asphalt covering the residual contaminated soil on the north end of the Site. The cap appears to be in satisfactory condition, and no repair, maintenance, or contingency actions are required at this time.

Institutional controls

Institutional controls in the form of a Covenant were implemented for Site in November 2018. The Covenant remains active and discoverable through the Spokane County Auditor's Office. Ecology found no evidence a new instrument has been recorded that limits the effectiveness or

applicability of the Covenant. This Covenant prohibits activities that will result in the release of contaminants contained as part of the cleanup action and prohibits any use of the property that is inconsistent with the Covenant, unless approved by Ecology in advance. This Covenant ensures the long-term integrity of the cleanup action.

New scientific information for individual hazardous substances or mixtures present at the Site

There is no new relevant scientific information for the hazardous substances remaining at the Site.

New applicable state and federal laws for hazardous substances present at the Site

There are no new applicable or relevant state or federal laws for hazardous substances remaining at the Site.

Current and projected Site and resource uses

The Site is used for light industrial purposes, with no anticipated change in Site use. The current Site use is not likely to have a negative impact on the protectiveness of the cleanup action.

Availability and practicability of more permanent remedies

The remedy implemented included containing hazardous substances, and it continues to be protective of human health and the environment. While more permanent remedies may be available, they are still not practicable at this Site.

Availability of improved analytical techniques to evaluate compliance with cleanup levels

The analytical methods used at the time of the cleanup action were capable of detection below MTCA Method A cleanup levels. The presence of improved analytical techniques would not affect decisions or recommendations made for the Site.

Conclusions

- The cleanup actions completed at the Site appear to be protective of human health and the environment.
- Soil cleanup levels have not been met at the Site; however, the cleanup action is determined to comply with cleanup standards under WAC 173-340-740(6)(f), since the

long-term integrity of the containment system is ensured and the requirements for containment technologies have been met.

- The Covenant for the property is in place and is effective in protecting human health and the environment from exposure to hazardous substances and the integrity of the cleanup action.

Based on this periodic review, Ecology has determined the requirements of the Covenant are being followed. No additional cleanup actions are required by the property owner at this time. The property owner is responsible for continuing to inspect the Site to ensure the integrity of the cleanup action and surface cap are maintained.

Next review

Ecology will schedule the next review for the Site five years from the date of this periodic review. If additional cleanup actions or institutional controls are required, the next periodic review will be scheduled five years after those activities are completed.

References

Ecology. Site Visit. February 8, 2024.

Ecology. No Further Action Opinion Letter. January 8, 2019.

Ecology. Environmental Covenant 6758082. November 6, 2018.

Spokane County Environmental Services. Final Cleanup Summary/ No Further Action Request. June 26, 2017.

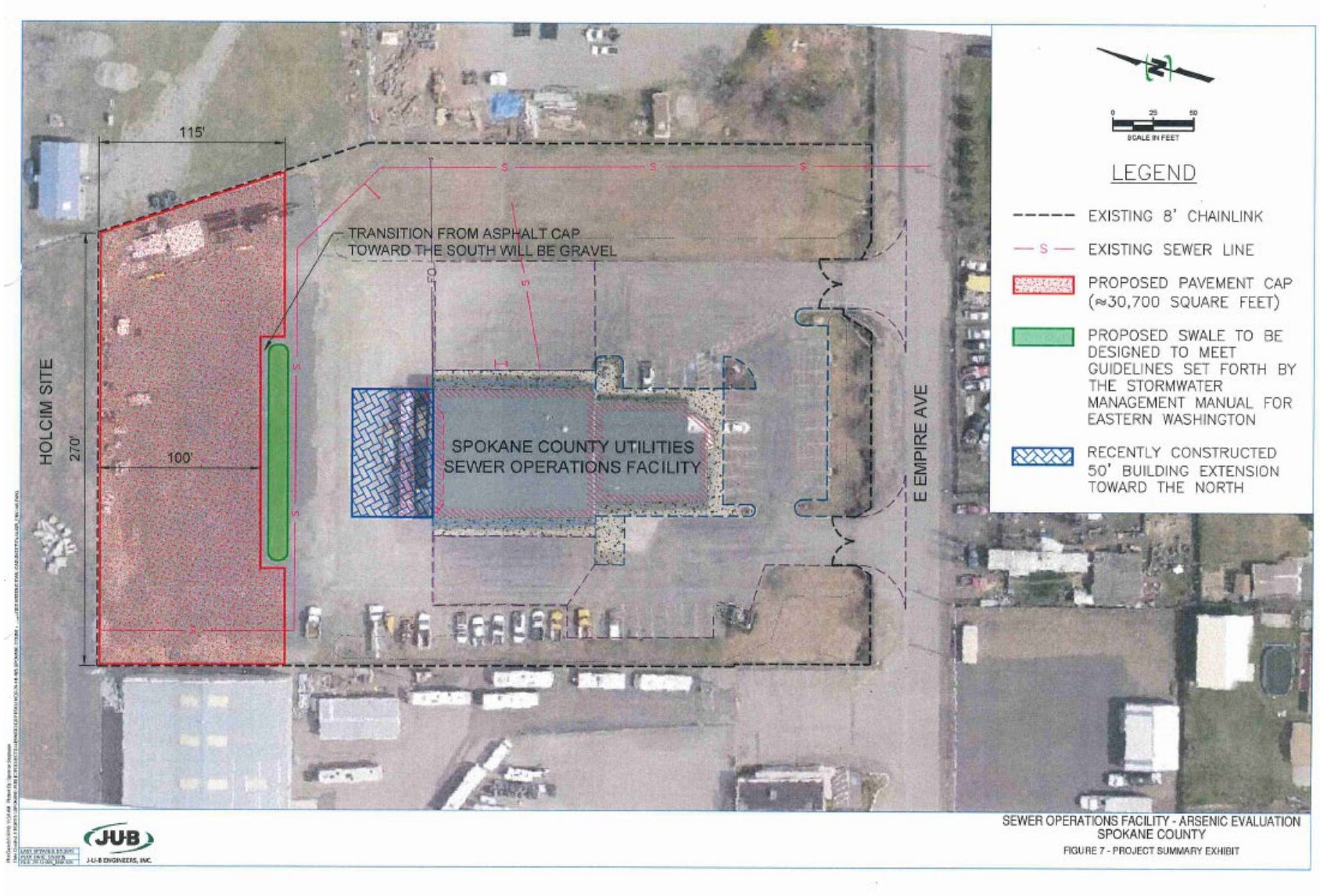
JUB and Schwyn Environmental Services. Voluntary Cleanup Action Report for Spokane County Sewer Operations Center. April 17, 2015.

JUB and Schwyn Environmental Services. Voluntary Cleanup Action Report for Spokane County Sewer Operations Center. November 12, 2014.

Schwyn Environmental Services. Arsenic in Soil Characterization Sampling Results, Spokane County Sewer Operations Center. August 19, 2014.

Appendix A. Vicinity Map

Appendix B. Site Plan



Appendix C. Photo Log

Photo 1: The drainage swale and asphalt cap, from the south

Photo 2: The capped area with vehicle and equipment storage, from the east

Photo 3: The capped area with vehicle and equipment storage, from the west

Photo 4: The drainage swale with adjacent gravel and asphalt surfaces, from the west