



Memorandum

Date: July 16, 2024
To: Sarah Van Glubt – Oregon Department of Environmental Quality
Cc: John O'Donovan, P.E. - BES Coordinated Site Assessment Program
From: Brian Marcum, P.E. - BES Coordinated Site Assessment Program
RE: ECSI #404 - Guilds Lake Landfill 2023 Annual Cap Inspection

Introduction

The City of Portland's Bureau of Environmental Services (BES), Coordinated Site Assessment (CSA) program, has prepared this memorandum to document the 2023 cap inspection of the Guilds Lake Landfill Site.

The site is a former landfill where incineration and municipal garbage landfilling occurred between the early 1900s and 1940s. An asphaltic concrete (AC) parking lot, concrete site features, site buildings, and other hardscape features act as a physical cap to prevent exposure to buried landfill debris and incinerator ash. The cap also acts to stop infiltration of surface water to the landfill material. Catch basins / OW separators collect sheet flow and divert it offsite via a stormwater system. Construction of the site cap was completed in June 1995 (Oregon Department of Environmental Quality [DEQ 1998]). The cap encompasses the entire site and is comprised of the following components:

- Site Buildings
- Gabion Retaining Wall
- Asphalt Concrete (AC) Paving
 - Pre-remedy Existing Pavement: A two-inch thick AC overlay with binder course was placed on existing 2-inch thick pavement in areas that were paved prior to construction of the 1995 site remedy (4 inches total).
 - Post-remedy New Pavement: A two-inch thick AC overlay with binder course placed over a two-inch thick AC base course and six inches of structural base fill in new paved sections constructed as part of the site remedy (10 inches total).
- Landscaped Areas
 - Pre-remedy Existing Landscaping: Portions of the cap include small areas planted with trees and shrubs that predated construction of the site remedy.
 - Post-remedy New Landscaped Areas: Landscaped areas constructed as part of the 1995 site remedy include:
 - a minimum of 12 inches of topsoil placed on top of a 10-mil waterproof membrane.
 - mounded soil and landscaping placed directly on top of the asphalt surfaces that were in place prior to construction.

Paved asphalt surfaces cover approximately 65 percent of the site. The gabion retaining wall is located to the west of the former incinerator and the remainder of the site is capped by buildings with minor landscaped areas. Additional site details are included in the Guilds Lake Site Remediation Plans (BES 1994). The cap is inspected on an annual basis and maintained as needed to ensure long term cap viability.

Work Completed

On December 27, 2023, staff from the BES, CSA Program inspected the cap at the Guilds Lake Landfill site. The integrity of the cap was assessed per the requirements of the Inspection Maintenance and Monitoring Plan (IMMP [CH2MHILL 1998]).

Purpose:

The inspection was conducted to document any degraded conditions and to assess the overall integrity of the site cap.

Inspection:

The entire cap, including fenced and unfenced areas, and gabion wall were visually inspected. Cap features are presented in Figure 1.

Inspection results:

Asphalt Cap:

Overall, the cap is in very good condition. The majority of the asphalt cap was repaved in the summer and fall of 2019. The 2019 paved area is excellent condition and shows no evidence of surface cracking or excessive wear. Due to access restrictions and ongoing business operations, secure tenant areas could not be repaved in 2019. Inspection of these areas revealed localized linear and alligator cracking in areas that were not recently repaved. The cracks observed during the 2023 inspection are surficial and do not penetrate the uppermost AC layer or the underlying AC layer that predated the 1995 remedy. However, the number of and size of the cracks has increased compared to previous inspections. Asphalt cracking at the Calbag metals portion of the site, behind the gabion wall, appears more widespread and is attributed the cyclical truck and equipment loading and materials staging.

Except for some minor ponding due and occasional debris blockage, the drainage system is in excellent condition and is functioning as designed. The remainder of the site cap (the buildings, remaining impervious surfaces, and landscaped areas) was in good condition.

Gabion Wall:

The gabion wall is in good condition, operating as designed, and does not have any wire damage or aggregate loss. An oblique protrusion is present in one section; however, the protrusion has been present for some time and does not appear to be shifting. The remainder of the wall appears plumb. Depending on the results of subsequent inspections, repair of this section may be required in the future.

Recommendations: Overall, the cap is in very good condition. Localized linear cracks and alligator cracking are present in areas that were not repaved in 2019. BES is planning to apply crack sealant to linear cracks in the second half of 2024. More extensive asphalt repairs at Calbag metals may be required in the next 2 - 4 years. BES will work with the tenant to complete the repairs and continue to monitor any changes in surface cracks.

The parking lot will continue to be inspected on an annual basis and repairs will be conducted as needed. If you have any questions regarding the content of this memo, please contact the CSA program at 503-823-8672.

References

BES. 1994. Guilds Lake/Lincoln & Allen Site Remediation Project Plans and Bid Package, Job No. 4925. City of Portland, Oregon – Department of Public Utilities, Bureau of Environmental Services. 1994.

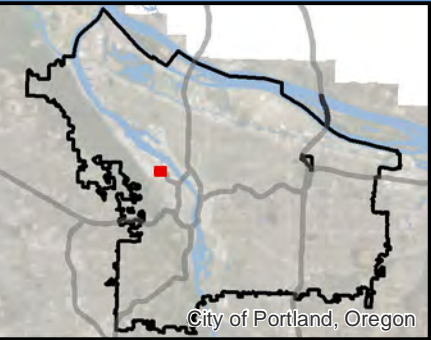
CH2MHILL. 1998. Inspection, maintenance, and monitoring plan: Guilds Lake Remediation Project, Portland, OR. Portland, OR: City of Portland, Bureau of Environmental Services.

DEQ. 1998. Certification of Completion. Guilds Lake Remediation Project. February 4, 1998

Enclosures

Figure 1	Site Area
Attachment A	Site Photos

Figures

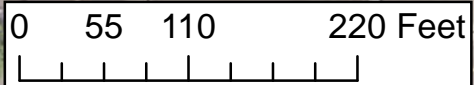
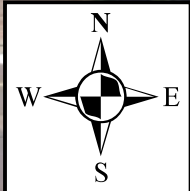


Guild Lake Landfill
Remediation Project
ECSI 404

2023 Cap Inspection

Figure 1 - Site Area

- Legend**
- Site Cap
 - Gabion Wall
 - Areas of Localized Cracking



Attachment A

Site Photos

ECSI #404 Guilds Lake Landfill – 2023 Annual Cap Inspection



Photo 1 - Entrance Road Looking South



Photo 2 - Main Lot Looking South

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Photo 3 - Fenced Lot Looking South



Photo 4 - Gabion Wall Looking South with Elk Statue

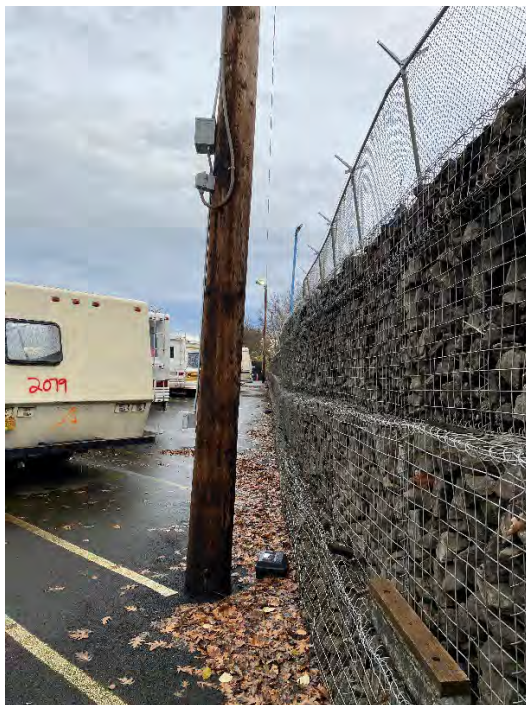


Photo 5 - Gabion Wall Looking North

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Photo 6 - Cracking in NW of Site Looking South



Photo 7 - Cracking in NE of Site Looking West

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Photo 8 – Cracking on Calbag Metals Lot looking SW, outside of area paved in 2019



Photo 9 – Cracking on Calbag Metals Lot looking NE, outside of area paved in 2019