Periodic Review

WA Parks North Head Lighthouse
Fort Canby State Park
Ilwaco, WA 98624

Facility Site ID#: 5040
Cleanup Site ID#: 11743

Prepared by:
Headquarters Cleanup Section
Toxics Cleanup Program

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1.0 INTRODUCTION

This document is a review by the Washington State Department of Ecology (Ecology) of post-cleanup Site conditions to assure human health and the environment are being protected at the WA Parks North Head Lighthouse site (Site). Cleanup at this Site was implemented under the Model Toxics Control Act (MTCA) regulations, Chapter 173-340 Washington Administrative Code (WAC).

Lead paint chips had fallen off of this historical lighthouse and contaminated adjacent soils. Characterization and cleanup activities at this Site were completed by the U.S. Coast Guard and their consultants in 2011. Ecology issued a No Further Action (NFA) letter on December 9, 2011 following a Site visit to inspect the area.

The cleanup actions resulted in concentrations of lead in soil remaining at the Site that exceed MTCA cleanup levels. The MTCA cleanup levels for soil are established under WAC 173-340-740. Lead in soil at concentrations exceeding MTCA cleanup levels was removed except for at locations where excavation was halted due to subsurface utilities. However, the entire area where lead was found in soil at concentrations greater than MTCA cleanup levels was reportedly cleaned up to a depth of six inches below ground surface. Engineered controls were constructed and implemented to prevent or limit movement of, or exposure to, hazardous substances at the Site. This included placement of clean topsoil backfill over the excavated areas and replanting with grass.

The NFA determination by Ecology indicated that topsoil should be inspected every five years and replaced and grass planted as needed. WAC 173-340-420(2) requires Ecology to conduct a periodic review of a Site every five years under the following conditions:

1. Whenever the department conducts a cleanup action
2. Whenever the department approves a cleanup action under an order, agreed order or consent decree
3. Or, as resources permit, whenever the department issues a no further action opinion,
4. and one of the following conditions exists at the Site:
    (a) Institutional controls or financial assurance are required as part of the cleanup;
    (b) Where the cleanup level is based on a practical quantitation limit; or
    (c) Where, in the department's judgment, modifications to the default equations or assumptions using Site-specific information would significantly increase the concentration of hazardous substances remaining at the Site after cleanup or the uncertainty in the ecological evaluation or the reliability of the cleanup action is such that additional review is necessary to assure long-term protection of human health and the environment.

When evaluating whether human health and the environment are being protected, the factors Ecology shall consider include [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 of mixtures present at the Site.

(c) New applicable state and federal laws for hazardous substances present at the Site.

(d) Current and projected Site use.

(e) Availability and practicability of higher preference technologies; and.

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

Ecology shall publish a notice of all periodic reviews in the Site Register and provide an opportunity for public comment.

2.0 SUMMARY OF SITE CONDITIONS

2.1 Site History

The North Head Lighthouse is a historical structure that was constructed in 1897. Ownership of the lighthouse was transferred from the U.S. Coast Guard to Washington State Parks in November 2012.

2.2 Site Investigations

The lead in soil was characterized before and after excavation in 2012 via x-ray fluorescence (XRF) field screening and laboratory analysis. The extent of lead contamination was delineated around the lighthouse and two small oil houses located east of the lighthouse. The area of contamination is shown in Figure 1 in Section 6.1.

2.3 Cleanup Levels and Points of Compliance

The cleanup level selected for the Site is the Method A cleanup level for lead of 250 milligrams per kilogram (mg/kg). This cleanup levels is based on unrestricted land use. The point of compliance is throughout the Site.

2.4 Remedial Actions

The cleanup of the lead in soil in 2011 consisted of excavation and off-Site disposal. All shallow soils with lead contamination and some deeper soils (depth greater than six inches below ground surface) were excavated. The excavated area was backfilled with clean soil and replanted with grass. As discussed above, some lead contamination at a depth greater than six inches below ground surface remained, requiring the need for periodic inspections to ensure that no exposure to contaminated soil occurs.

2.5 Environmental Covenant

No Environmental Covenant (EC) has been recorded for this Site; however, Ecology and Washington State Parks are committed to ensure that human health and the environment continue to be protected at this Site. Periodic reviews will be continued to ensure that human health and the environment are protected in the future.

3.0 PERIODIC REVIEW

3.1 Effectiveness of completed cleanup actions

A Site visit was conducted by Ecology on May 4, 2011, prior to issuance of the NFA letter to ensure that the engineering controls were effective. For this periodic review, the area of concern was examined and photographed on July 7, 2022 by Evan Roberts, Park Area Manager with Washington State Parks. Evan Roberts stated:

> *"…the site is in very good condition. We completed restoration of the lighthouse this past year including a new top coat of gravel."*

Evans Roberts verified that the area of interest has a gravel surface that is periodically supplemented/maintained to keep it as a smooth and dry walking surface. The photographs provided by Evan Roberts are in Appendix 6.2. Based upon the inspection conducted on July 7, 2022, the institutional controls for soil at the Site continue to prevent exposure to contaminated soil by ingestion and direct contact. Ecology recommends that the gravel surface in the area of interest be regularly inspected and maintained as needed.

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

There is no new scientific information for the contaminants related to the Site.

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

The cleanup at the Site is governed by WAC 173-340-702(12) (c) [2001 ed.] and provides that,

> "*A release cleaned up under the cleanup levels determined in (a) or (b) of this subsection shall not be subject to further cleanup action due solely to subsequent amendments to the provision in this chapter on cleanup levels, unless the department determines, on a case-by-case basis, that the previous cleanup action is no longer sufficiently protective of human health and the environment*."

There has been no change in the cleanup level for lead in soil.

3.4 Current and projected Site use

No change in the current and projected Site use is likely.

3.5 Availability and practicability of higher preference technologies

The remedy implemented included containment of hazardous substances, and it continues to be protective of human health and the environment. While higher preference cleanup technologies may be available, they are still not practicable at this Site. Further cleanup activities are not considered by Ecology to be warranted at this time.

3.6 Availability of improved analytical techniques to evaluate compliance with cleanup levels

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

4.0 CONCLUSIONS

The institutional controls implemented for soil at the Site continue to prevent exposure to lead contaminated soil by ingestion and direct contact. However, based on the above observations made during a Site inspection and photographs, Ecology recommends that the gravel surface in the area of interest be regularly inspected and maintained as needed.

4.1 Next Review

The next review for the Site will be scheduled five years from the date of this periodic review.

5.0 REFERENCES

Ecology. Letter re *No Further Action at North Head Lighthouse*. December 9, 2011.

Ecology. Site Visit by Barry Rogowski. May 4, 2011.

Whiteshield. Inc. *Draft Letter Report, Excavation of Lead Contaminated Soils, North Head Lighthouse, PSN4086967*. November 14, 2011.

6.0 APPENDICES

6.1 6.1 Site Plan

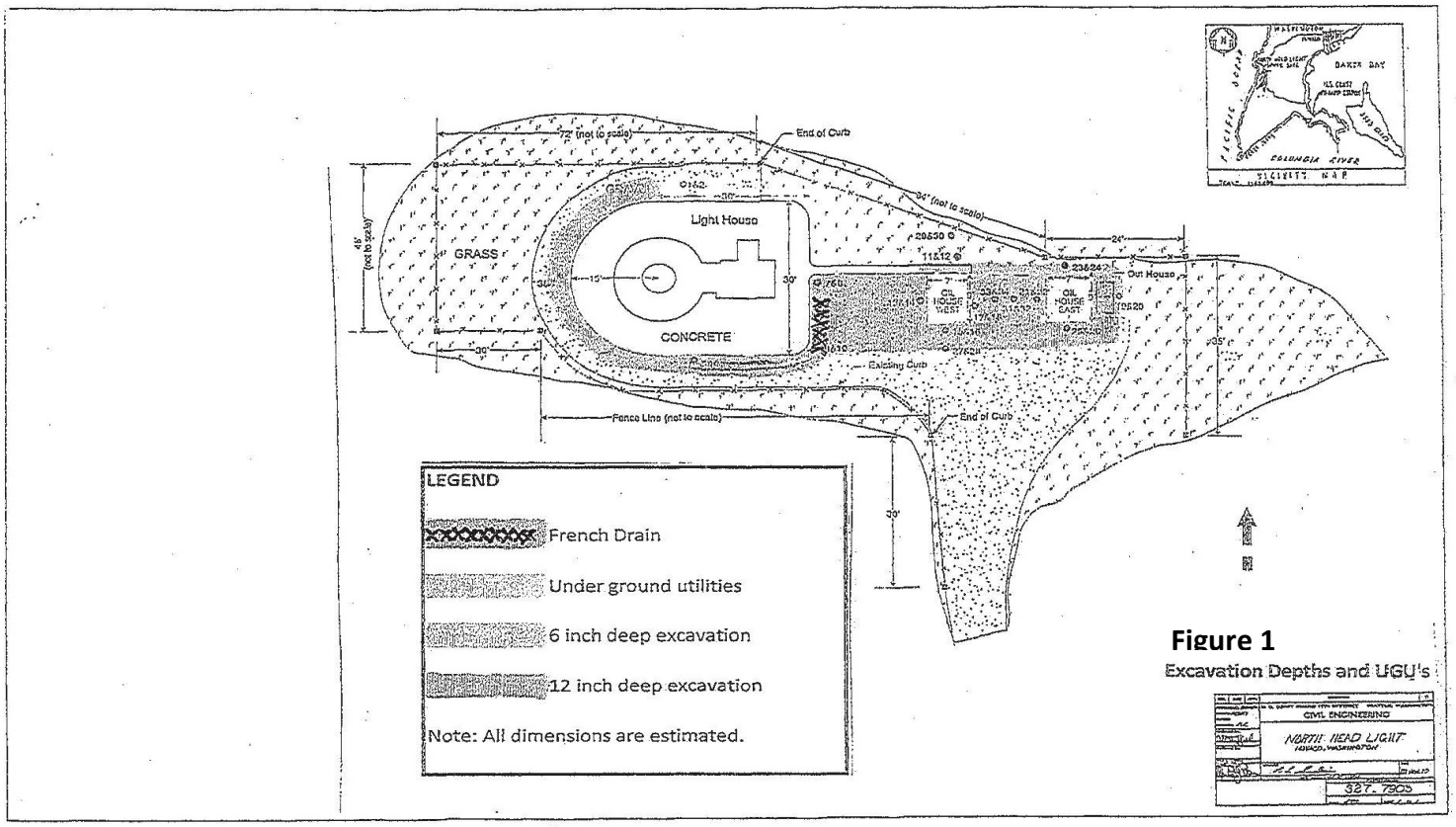

Figure 1
Excavation Depths and UGU's

6.2 Photo log

Photo 1: View of the Lighthouse from the Southeast (view to the northwest)

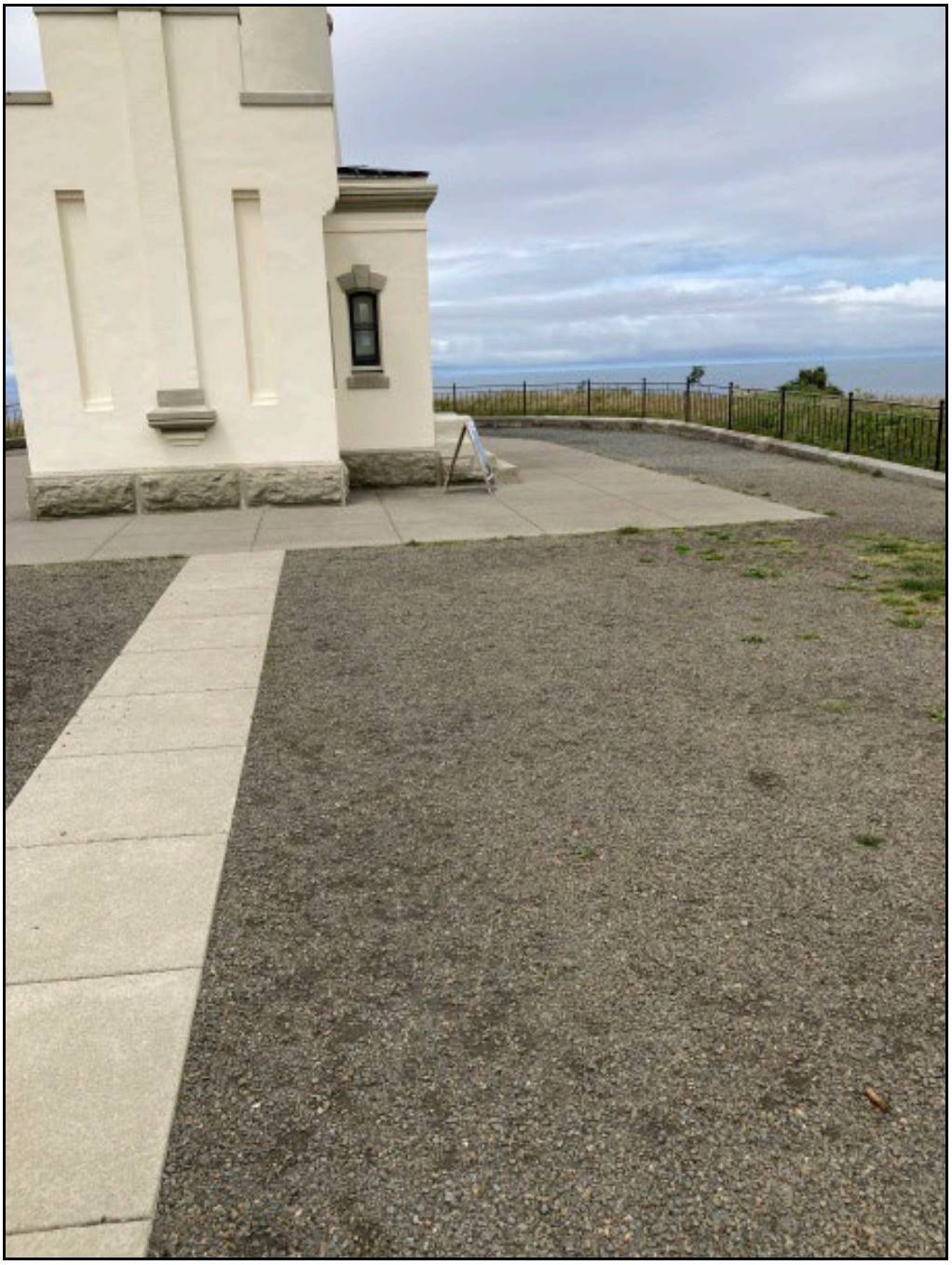

Photo 2: Gravel area to the East of the Lighthouse (view to the west)

Photo 3: Paved Path and Gravel to the East of the Lighthouse (view to the west)

Photo 4: Gravel Surface East of the Lighthouse (view to the north)

Photo 5: Gravel Surface West of the Lighthouse (view to the west)