Waste Acceptance, Treatment, and Disposal Requirements for Petroleum Contaminated Soils under the Institutional Controls Program within the Bunker Hill Superfund Site

Idaho Department of Environmental Quality
Kellogg Superfund Office
June 30, 2021

Purpose:

Historic mining, milling, and smelting operations have caused heavy metals contamination in the Silver Valley. Wastes from these processes were used in the past as fill in land development and road construction. Historic mining and construction practices resulted in the development and implementation of the Institutional Controls Program (ICP) where considerable attention is given to soils that have historically been impacted with metals, particularly lead. Special considerations are required in the Bunker Hill Superfund Site when responding to petrochemical spills or releases.

IDEQ has established this Petroleum Contaminated Soils (PCS) protocol for staging, characterizing, treating, and disposal of soils excavated within the ICP boundary that have been contaminated with petroleum products as the result of accidents along the I-90 corridor. The protocol is consistent with state and federal regulations for handling and disposal of PCS. In sum, a generator of small quantities (<50 cubic yards) may at their expense, enter into a consent order with IDEQ to stage, characterize, treat, and subsequently dispose of PCS at a BHSS repository. For quantities greater than 50 cubic yards, the same process will be used as long as the waste can be demonstrated to occur within the ICP boundaries; however, larger staging areas will need to be constructed and maintained through a coordinated effort between the generator and the repository manager. It should be noted that other than PCS generated from accidents along the I-90 corridor, Box waste must be disposed at Page Repository and Basin wastes must be disposed in a Basin repository.

Additional details are included within the appendices of this protocol. Locations where ICP wastes are expected to be encountered are shown on the map in Appendix A. A decision tree for how to handle PCS following a petroleum release is shown in Appendix B. The consent order template is included in Appendix C which includes a definition of PCS and acceptance, treatment, and disposal requirements.

Agency Roles and Responsibilities

Idaho Department of Environmental Quality Coeur d'Alene Regional Office (CRO) & Kellogg Superfund Office

The CRO provides the State's primary contact for oversight of responses to spills or releases of petrochemicals. All response plans, sampling plans, analysis reports, corrective action, and notification and financial assurance for disposal or treatment of petroleum contaminated soils must be coordinated through IDEQ's CRO and the Kellogg Superfund Office. Any generator consultant or contractor that is responsible for remediating a release and who intends to use the Page Repository for land treatment and disposal of the waste materials must sign a consent order with IDEQ specifying roles and responsibilities, including commitments to pay for remedial costs.

State Office – Remediation Bureau (SO)

The SO is collaboratively responsible, with the U.S. Environmental Protection Agency, for implementation of remedial actions under the Bunker Hill and Coeur d'Alene Basin Superfund cleanups, including the development, operation, and closure of the ICP repositories at East Mission Flats, Page, and Big Creek. The collaborative effort is a function of cooperative agreements made with the U.S. Environmental Protection Agency, Panhandle Health District, and the Upstream Mining

Group, and is subject to the mandates and conditions presented in numerous Consent Decrees, Records of Decisions, and Operating Plans for facilities contained with the Bunker Hill Superfund Site.

Panhandle Health District

The Panhandle Health District (PHD) adopted and administers the ICP through a set of rules and regulations designed to ensure the integrity of clean soil and other protective barriers placed over contaminants left throughout the Bunker Hill Superfund Site. The ICP also provides education, sampling assistance, clean soils for small projects (less than one cubic yard of material), pickup of soil removed from small projects and a permanent disposal site for contaminated soils generated site-wide. The ICP also regulated and provides assistance with construction and renovation projects on building interiors that involve ceiling and attic work, insulation removal, and work in dirt basements and crawl spaces. PHD's ICP rule is available at:

https://adminrules.idaho.gov/rules/current/41/410101.pdf

Special Considerations:

Any petroleum contaminated soil that does not characterize as an ICP waste, or cannot be treated to meet the criteria for ICP wastes, will not be accepted or disposed at the Page Repository. These rejected wastes must be disposed of in a RCRA Subtitle C or other appropriate facility.

Responsible generators, consultants or contractors unwilling to enter into a consent order with IDEQ for proper temporary storage, treatment, sampling, documentation and financial assurance will be denied access to the Page Repository, regardless of the waste characterization generated. The alternative disposal site for the mixed petroleum and metals waste is a RCRA Subtitle C or other appropriate facility.

Land Treatment and Disposal Location

Locations at the Page Repository for land treatment of petroleum contaminated ICP wastes will be specifically designated by the Page Repository Manager. The designated locations and land treatment will be physically separated from the repository by an impermeable barrier. The generator, consultant, or contractor must locate and manage a temporary storage area for the period during which PCS and metal analysis is in progress.

Chapter V (Landfarming) of the US Environmental Protection Agency's How to Evaluate Alternative Cleanup Technologies for Underground Storage Tank Sites: A Guide for Corrective Action Plan Reviewers, October 2017, may be consulted for landfarming guidance and techniques. This guidance is available at: https://www.epa.gov/sites/production/files/2014-03/documents/tum_ch5.pdf.

The land treatment area should be located and constructed according to IDEQ and the Page Repository Manager's specifications and at the generator's expense. After the effectiveness of land treatment has been demonstrated to IDEQ by meeting the requirements in the consent order, the residual soils may be incorporated into the main body of the ICP repository after consultation with the Page Repository Manager, again at the generator's, consultant's or contractor's expense.

Approved Consultants and Contractors

Land treatment and disposal of PCS at the Page Repository is a specialty service that will only be permitted to capable consultants and contractors. These contractors and consultants must demonstrate to IDEQ a willingness to conduct this activity correctly and diligently. These contractors and/or consultants must enter into a consent order for completion of land treatment activities in a timely manner, accepting from their client the legal obligation to treat the excavated soils to levels below state mandated risk values, and then dispose of the metals contaminated soils in an approved location within the repository. These contractors and/or consultants must also commit, in writing, to bearing all costs for developing temporary storage and treatment areas, waste treatment, sampling, documentation and reporting to IDEQ, and incorporation of the wastes for final disposal in the repository.

Unacceptable Contaminated Waste

In this situation, the responsible party must export the material, at their cost, to a RCRA Subtitle C permitted facility. Should hazardous materials be released in the Bunker Hill Superfund Site causing contamination of soil or other substrate, the responsible party must export the material to a RCRA Subtitle C permitted facility.

Disclaimer's

At no time will the IDEQ, PHD, or the South Fork of the Coeur d'Alene River Sewer District, who owns a large portion of the Page ICP Repository, warrant the work conducted by the generator, its consultants or contractors, or release the generator, its consultants or contractors from liability for the wastes or releases from the wastes.

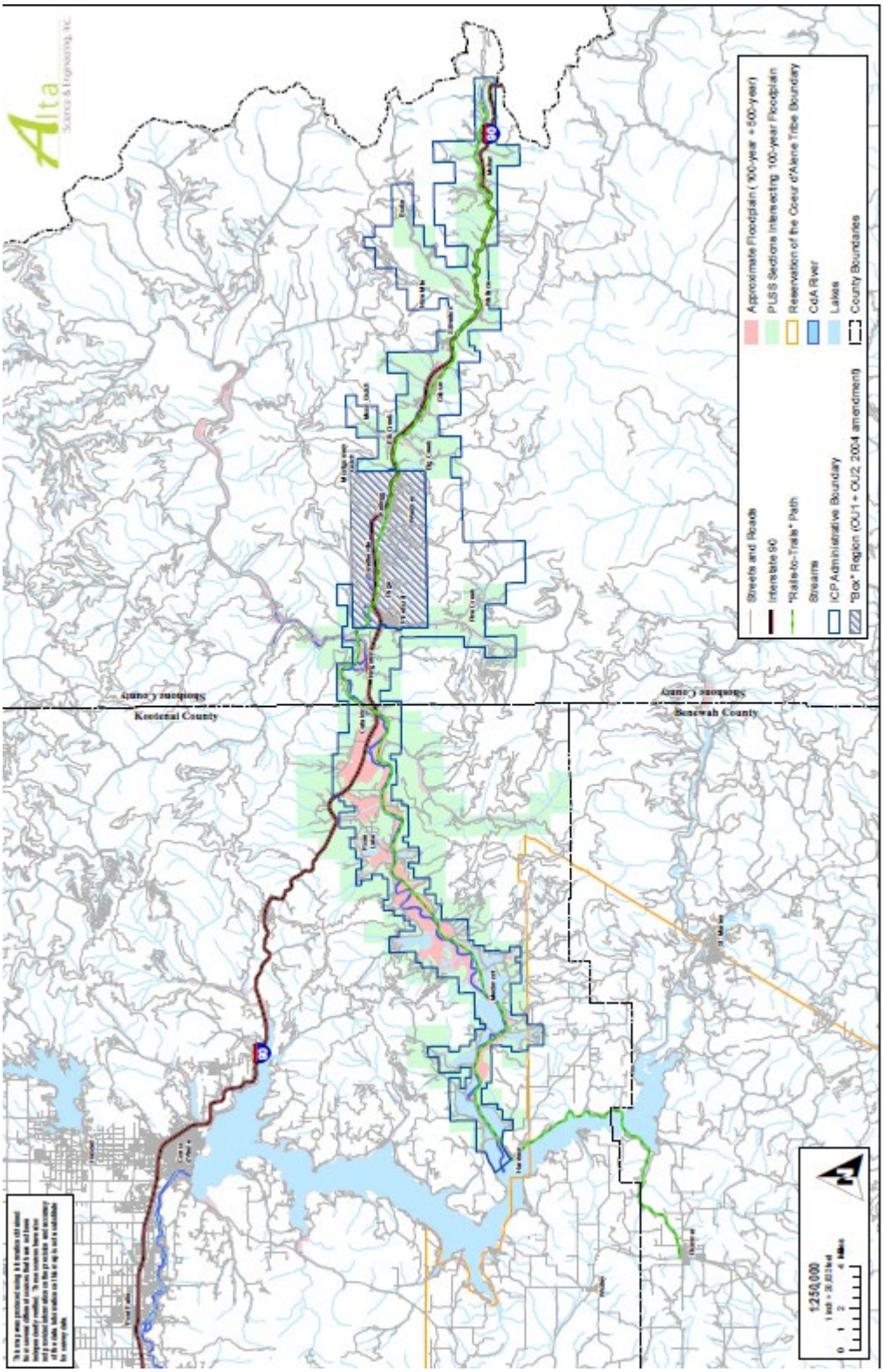
Appendices:

Appendix A: Map

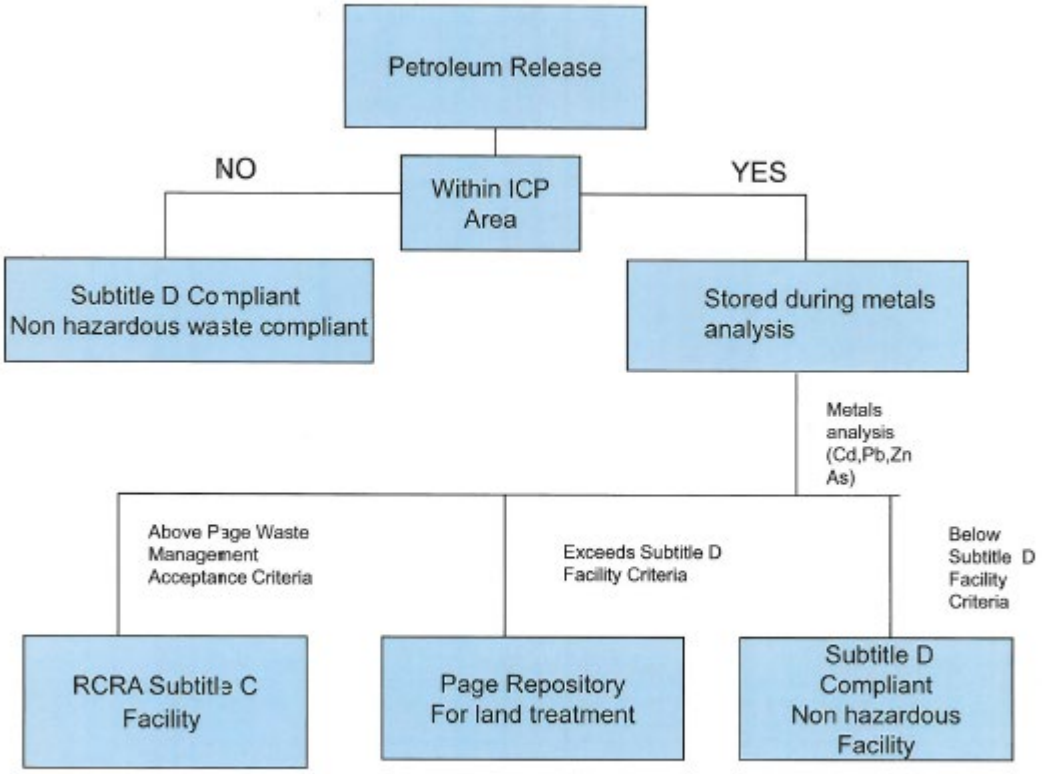
Appendix B: Decision Tree

Appendix C: Consent Order Template

Appendix A


Alta
Approximate Floodplain (100-year + 500-year)
PLSS Sections Intersecting 100-year Floodplain
Reservation of the Coeur d'Alene Tribe Boundary
CdA River
Lakes
County Boundaries
Streets and Roads
Interstate 90
"Rails-to-Trails" Path
Streams
ICP Administrative Boundary
"Box" Region (OU1 + OU2, 2004 amendment)
Kootenai County
Benewah County
1:250,000

Appendix B


Petroleum Release
NO
Within ICP Area
YES
Subtitle D Compliant Non hazardous waste compliant
Stored during metals analysis
Metals analysis (Cd,Pb,Zn As)
Above Page Waste Management Acceptance Criteria
Exceeds Subtitle D Facility Criteria
Below Subtitle D Facility Criteria
RCRA Subtitle C Facility
Page Repository For land treatment
Subtitle D Compliant Non hazardous Facility

Appendix C

IDAHO DEPARTMENT OF ENVIRONMENTAL QUALITY

In the matter of: Petroleum Contaminated Soil Land Treatment at the Page Institutional Control Program Repository Bunker Hill Superfund Site	CONSENT ORDER Idaho Code § 39-108

1. Pursuant to Idaho Code § 39-108 Idaho Environmental Protection and Health Act (EPHA), the Idaho Department of Environmental Quality (Department) and _____enter into this Consent Order for the purpose of allowing access to and placement of Petroleum Contaminated Soils (PCS) at the Page Institutional Control Program Repository (Page Repository).

2. PCS are soils that have petroleum or a mixture of petroleum products with de minimis quantities of other regulated substances as defined in IDAPA 58.01.24.010.17 that are above unrestricted use screening levels identified in Table 2 of the Idaho Risk Evaluation Manual for Petroleum Releases.

3. This Consent Order is for the disposal of the PCS exclusively at the Page Waste Repository located west of Smelterville within the Bunker Hill Superfund Site. The Consent order does not address the disposal/treatment of PCS at any other waste repository within the Bunker Hill Superfund Site.

4. The disposal and treatment of PCS at the Page Waste Repository is solely at the discretion of the Department and Page Repository Manager. No rights or obligations by the applicant or the Department and Page Waste Repository Manger are explicitly or implicitly expressed in the Consent Order.

5. This Consent Order exclusively relates to the placement and management of PCS at the Page Repository and does not otherwise govern or address clean-up of contamination at the petroleum release site. Nothing in this Consent Order shall be construed to affect or bar the Department from seeking appropriate legal relief as relates to the petroleum release site under the EPHA or any other applicable laws and regulations.

6. _____ is the owner and/or operator of property located at _____. As a condition of the Department's agreement to allow access to the Page Repository, _____ shall take full responsibility including all financial costs related thereto for land treatment of PCS at the Page Repository until petroleum constituent concentrations at or below the unrestricted use screening levels identified in Table 2: *Screening Level Concentrations for Soil, Groundwater, and Soil Vapor*, of the Idaho Risk Evaluation Manual for Petroleum Releases, and following treatment place the resulting metals contaminated soil into the Page Facility as described in this Consent Order.

7. If unrestricted use screening levels are not attained by the land treatment process, _____ will at their expense remove the PCS not attaining screening levels to an appropriate waste facility in conformity with all applicable legal requirements including but not limited to any necessary notifications for the offsite shipment of hazardous substances.

8. _____ shall perform the following actions in order to remove petroleum contaminants from soils demonstrated to be co-contaminated with trace (heavy) metals at levels below principle threat waste concentrations.

a. Obtain permission from the Department's Kellogg Superfund Office in writing to land treat PCS at the Page Repository. Letters of request should justify land treatment in terms of the petroleum and metals concentrations of the PCS proposed to be treated.

b. Obtain an Institutional Controls Program Permit from Panhandle Health District's Kellogg office before removing any PCS.

c. Place all PCS for treatment at the repository at the location(s) designated by the Repository Manager.

d. Segregate the PCS to be treated from all other materials in the repository using a barrier system (berms and liner) that will maintain a separation during treatment of the PCS.

e. PCS will be treated until concentrations of target petroleum compounds, identified in Table 1 of IDAPA 58.01.24, are at or below unrestricted use screening levels identified in Table 2 of the Idaho Risk Evaluation Manual for Petroleum Releases, and the procedures described in the attached Idaho Department of Environmental Quality Mine Waste Program document entitled "Waste Acceptance, Treatment and Disposal Requirements for Petroleum contaminated ICP Soils" dated June 30, 2021. Chapter V (Landfarming) of the US Environmental Protection Agency's *How To Evaluate Alternative Cleanup Technologies for Underground Storage Tank Sites. A Guide for Corrective Action Plan Reviewers, October 2017*, may be consulted for landfarming guidance and techniques. A copy of this guidance can be found at: https://www.epa.gov/sites/production/files/2014-03/documents/tum_ch5.pdf.

f. All work undertaken in accordance with this Consent Order shall not deviate from the procedure described in the "Waste Acceptance, Treatment and Disposal Requirements for

Petroleum contaminated ICP Soils" without prior notification to and written approval by the Department.

g. Periodic written status reports will be submitted to the Department and Page Repository Manager describing concentrations of contaminants, treatment process and general condition of the land farm. The frequency of status reports will be determined by the Department by the Page Repository Manager.

h. All decisions and approvals of the land treatment operation including its completion will be made for the Department by the Kellogg Superfund Office. All decisions concerning the post land treatment placement of the soil will be made for the Department by the Page Repository Manager.

i. After land treatment and proper placement in the repository is completed and reported on in writing to the satisfaction of the Department for any single PCS treatment case, a no further action letter for that case will be issued for the Department by the CRO.

9. ____ recognizes that failure to comply with the terms of this Consent Order may result in termination of this Consent Order permitting the land treatment privilege and an order to remove the material to an appropriate waste facility.

10. This Consent Order does not relieve any obligation to comply with any provision of the Water Quality Standards, IDAPA 58.01.02 or any other applicable local, state, or federal laws.

11. Upon fulfilling the requirements of this Consent Order, _____may petition the Department in writing for a termination of this Consent Order. This Consent Order shall remain in full force and effect until the Department acknowledges in writing that the Consent Order is terminated and that_____ has fulfilled all requirements of this Consent Order.

12. This Consent Order shall bind successors and assigns until terminated in writing by the Department.

13. The effective date of this Consent Order shall be the date of signature by the Director of the Idaho Department of Environmental Quality.

DATED this _____day of_____, 20 __

By: _____
Jess Byrne, Director
Idaho Department of Environmental Quality

DATED this _____day of_____, 20 __

By: _____
Owner / Operator