

APPENDIX A

DNR FORM SM-8A – APPLICATION FOR RECLAMATION PERMIT

RECEIVED
March 8, 2024
Washington Geological Survey



APPLICATION FOR RECLAMATION PERMIT AND PLAN (Form SM-8A)

Check appropriate box(es): [] new permit [] revision of existing permit [] transfer of permit [X] expansion

NOTE: Do not attempt to complete this form until you have carefully read "Instructions for Form SM-8A".

1. NAME OF APPLICANT/PERMIT HOLDER(S) CB National LLC
2. MAILING ADDRESS PO Box 293, Centralia, WA 98531-0293
3. Telephone 360-269-6000 Email marc.c@cciev.com
4. NAME OF MINE Chehalis Hill (formerly Conwell Hill)
5. Street address and milepost of surface mine 1300 N National Avenue, Chehalis, WA 98532
6. Distance (miles) Within the city limits of Chehalis
7. Direction from North
8. Nearest community Chehalis, WA
9. COUNTY Lewis
No attachments will be accepted. Legal Description of permit area:
10. Do you or any person, partnership, or corporation associated with you now hold, or have you held, a surface mining operating or reclamation permit? [X] yes [] no
11. Are all of these mines now in compliance with RCW 78.44, WAC 332-18, and conditions of the permits? [] yes [X] no

12. TOTAL ACREAGE OF PERMIT AREA APPLIED FOR: (Include all acreage to be permitted. See Form SM-6.) 49 acres
13. Total disturbed acreage (Include all acreage to be disturbed by mining and reclamation during the life of the mine.) Total area to be disturbed: ~40 acres. Area to be disturbed in next 36 months: 6 acres.
14. Maximum vertical depth (thickness) mined below pre-mining topographic grade will be 175 feet.
15. Lowest elevation of excavated mine will be 280 feet relative to mean sea level. Highest elevation of excavated mine will be 460 feet relative to mean sea level.
16. Type of proposed or existing mine: [X] pit [] quarry
17. Material(s) to be mined: [X] sand and gravel [] rock or stone [] clay [] metal [] limestone [] silica [] other
18. Deposit type: [] glacial [] river floodplain (alluvial) [] river channel deposits [] talus [X] bedrock [] lode [] other
19. Expected start date of mining: Summer 2024
20. Estimated number of years: 20
21. Total quantity to be mined over life of mine (estimated): 4.4 million [] tons or [X] cu yds
22. Estimated annual production: 220,000 [] tons or [X] cu yds
23. Subsequent land use: [] industrial [X] commercial [] residential [] agricultural [] forestry [] wetlands and lakes [] other
County or Municipality Approval for Surface Mining (Form SM-6) attached? [X] yes [] no
24. Reclaimed elevation of floor of mine: 280 feet relative to mean sea level Reclaimed elevation is shown on cross sections? [X] yes [] no
25. SEPA Checklist required? [X] yes [] no
26. Application fee for a new reclamation permit is herewith attached? [X] yes [] no

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22. SEGMENTAL RECLAMATION		
Permit area has been divided into segments for mining and a mining schedule has been developed?	<input checked="" type="checkbox"/>	yes <input type="checkbox"/> no
If no, explain:		
Permit area has been divided into segments for reclamation and a reclamation schedule has been developed?	<input checked="" type="checkbox"/>	yes <input type="checkbox"/> no
If no, explain:		
23. SITE PREPARATION		
23A. Saving Topsoil, Subsoil, and Overburden for Reclamation		
Thickness of topsoil is <u>0-0.7</u> feet	Thickness of subsoil is <u>0-0.7</u> feet	Depth to bedrock is <u>0-1.5</u> feet
Total volume of topsoil is <u>27,000</u> cubic yards	Total volume of subsoil is <u>27,000</u> cubic yards	
Volume of stored topsoil/subsoil is <u>0</u> cubic yards and will require <u>3</u> acres for storage.		
Storage areas are shown on maps and will be marked on the ground with permanent boundary markers?	<input checked="" type="checkbox"/>	yes <input type="checkbox"/> no
Topsoil will be salvaged?	<input checked="" type="checkbox"/>	yes <input type="checkbox"/> no
If no, explain:		
Topsoil and overburden will be moved to reclaim an adjacent depleted segment?	<input checked="" type="checkbox"/>	yes <input type="checkbox"/> no
If no, explain:		
Before materials are moved, vegetation will be cleared and drainage planned for soil storage areas?	<input checked="" type="checkbox"/>	yes <input type="checkbox"/> no
If no, explain:		
Soil storage areas will be stabilized with vegetation to prevent erosion if materials will be stored for more than one season?	<input checked="" type="checkbox"/>	yes <input type="checkbox"/> no
If no, explain:		
23B. Permit and Disturbed Area Boundaries		
Boundary of the permit area will be marked on the ground with permanent boundary markers?	<input checked="" type="checkbox"/>	yes <input type="checkbox"/> no
Explain boundary markers: Posts and fences		
23C. Setbacks Screens and Buffers		
Are Screens required and are shown on maps?	<input type="checkbox"/>	yes <input checked="" type="checkbox"/> no
The reclamation setback for this site will be <u>30</u> feet wide.		
Is a permanent, undisturbed buffer planned for this site?	<input type="checkbox"/>	yes <input checked="" type="checkbox"/> no
If no, explain: No buffers required. Setbacks will be used for topsoil storage.		
Setbacks and buffers are shown on maps and have been marked on the ground with permanent boundary markers?	<input checked="" type="checkbox"/>	yes <input type="checkbox"/> no
If no, explain:		
23D. Buffers to Protect Streams and Flood Plains		
Will the site include a stream or flood plain?	<input type="checkbox"/>	yes <input checked="" type="checkbox"/> no
If yes, see "Additional Requirements for Mines in Flood Plains" in "Instructions for SM-8A".		
If no, skip to 23E.		
A stream buffer of at least 200 feet has been marked on the ground with permanent boundary markers?	<input type="checkbox"/>	yes <input type="checkbox"/> no
A buffer of at least 200 feet from the 100-year flood plain has been marked on the ground with permanent boundary markers?	<input type="checkbox"/>	yes <input type="checkbox"/> no
If no, explain:		
Copy of Shoreline Permit from local government or the Department of Ecology is attached?	<input type="checkbox"/>	yes <input type="checkbox"/> no
Hydraulic Project Approval from the Department of Fish and Wildlife is attached?	<input type="checkbox"/>	yes <input type="checkbox"/> no

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23E. Conservation Buffers	
Are there any conservation buffers?	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no
If no, skip to 23F	
Conservation buffers will be established for the following purpose(s): <i>(Check all that apply)</i> <input type="checkbox"/> unstable slopes <input type="checkbox"/> wildlife habitat <input type="checkbox"/> water quality <input type="checkbox"/> other Describe the nature and configuration of the conservation buffer(s):	
Conservation buffers are shown on maps and have been marked on the ground with permanent boundary markers?	<input type="checkbox"/> yes <input type="checkbox"/> no
23F. Ground Water	
High water table depth is _____ feet <input type="checkbox"/> relative to mean sea level, <input type="checkbox"/> below original surface, or <input checked="" type="checkbox"/> unknown. Low water table depth is _____ feet <input type="checkbox"/> relative to mean sea level, <input type="checkbox"/> below original surface, or <input checked="" type="checkbox"/> unknown. Annual fluctuation of water table is from _____ feet on _____ to _____ feet on _____.	
Are well logs attached?	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no
The shallowest aquifer is <input type="checkbox"/> confined <input checked="" type="checkbox"/> unconfined	
The site will be mined: <input type="checkbox"/> wet <input checked="" type="checkbox"/> dry <input type="checkbox"/> both Describe mining method: Cut method	
The site is in a: <input type="checkbox"/> critical aquifer recharge area <input type="checkbox"/> sole source aquifer <input type="checkbox"/> public water supply watershed <input type="checkbox"/> wellhead protection area <input type="checkbox"/> special protection area <input type="checkbox"/> designated aquifer protection area <i>If checked above, see "Additional Requirements for Mines in Hydrologically Sensitive Areas" in "Instructions for SM-8A".</i>	
Ground water study attached?	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no
If no, explain: The mine is located atop a narrow ridge with little catchment area to impact groundwater. The final mine floor will remain above groundwater and above the ground level of adjacent developments, which have City of Chehalis water service.	
23G. Archeology	
Are archeological/cultural resource sites present?	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no
If yes, describe how you will protect these resources:	
24. MINING PRACTICES TO FACILITATE RECLAMATION	
24A. Soil Replacement	
Topsoil and (or) subsoil will be restored?	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
If "no", explain: Topsoil will be replaced on final slopes. The final mine floor will be developed for commercial post-mining use and will not need topsoil.	
Subsoil will be replaced to an approximate depth of <u>0</u> feet on the pit floor and a depth of <u>1</u> feet on slopes. Topsoil will be replaced to an approximate depth of <u>0</u> feet on the pit floor and a depth of <u>1</u> feet on slopes.	
If topsoil is in short supply, it will be strategically placed in depressions and low areas in adequate thickness to conserve moisture and promote revegetation?	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
If no, explain:	
Topsoil will be moved when conditions are not overly wet or dry?	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
If no, explain:	
Topsoil will be restored to promote effective revegetation and to stabilize slopes and mine floor?	<input checked="" type="checkbox"/> yes <input checked="" type="checkbox"/> no
If "no", explain: "Yes" for final slopes. "No" for mine floor due to post-mining commercial use.	
Topsoil will be replaced with equipment that will minimize compaction, or it will be plowed, disked, or ripped following placement?	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
If no, explain:	

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Topsoil will be immediately stabilized with grasses and legumes to prevent loss by erosion, slumping, or crusting? If no, explain:	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
Segmental topsoil removal and replacement is shown on maps? If no, explain:	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
Topsoil will be imported? If yes, describe source. Approved construction site export, if needed, though not anticipated. Estimated volume is <u>unknown at this time</u> _____ cubic yards.	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
Synthetic topsoil made from compost, biosolids, or other amendments will be used and (or) made on site to supplement existing topsoil?	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no
Materials such as till, loess, and (or) silt are available on site that could be used to supplement topsoil for reclamation. If yes, explain:	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no
Silt from settling ponds or a filter press will be used for reclamation?	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no
Settling pond clay slurries will be pumped or hauled to other segments for reclamation? If yes, explain:	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no
24B. Removal of Vegetation	
Vegetation will be removed sequentially from areas to be mined to prevent unnecessary erosion? If no, explain:	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
Small trees and other transplantable vegetation will be salvaged for use in revegetating other segments? If yes, give details. If no, explain: The small trees and vegetation that will be removed will not be suitable for subsequent use.	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no
Wood and other organic debris will be: <input type="checkbox"/> recycled <input type="checkbox"/> removed from site <input checked="" type="checkbox"/> chipped <input type="checkbox"/> burned <input type="checkbox"/> buried <input type="checkbox"/> used to synthesize topsoil or mulch <input type="checkbox"/> other (<i>explain</i>)	
Solid waste disposal, burning, and land use permits are attached?	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no
Some coarse wood (logs, stumps) and other large debris will be salvaged for fish and wildlife habitats? If yes, give details. If no, explain: Yes, where feasible and as reclamation area allows.	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
24C. Stormwater and Erosion control for Reclamation	
Pit floor will slope at gentle angles toward highwall, sediment retention pond, or proper drainage? If yes, give details. If no, explain: All stormwater coming from slopes and floor will be directed toward infiltration areas.	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
Revegetation, sheeting, and (or) matting will be used to protect areas susceptible to erosion? If yes, give details. If no, explain: All slopes will be hydroseeded and straw will be laid over the top to help prevent erosion.	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
Water control systems used during segmental reclamation will:	
Divert clean water around pit?	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
Trap sediment-laden runoff before it enters a stream?	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
Be established to prevent erosion of setbacks and neighboring properties?	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
Be removed or reclaimed?	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no
If any answers are no, explain: Systems needed to direct stormwater to the site interior and the reclaimed mine floor will be retained.	

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Stormwater system design will be capable of carrying the peak flow of the 25-year, 24-hour precipitation event? (Data are available at the National Oceanic And Atmospheric Administration (NOAA))	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
If yes, are calculations attached?	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
If yes, give details. If no, explain: Seasonal runoff will be captured in the mined excavation and conveyed to stormwater infiltration areas in the mine floor. Excess runoff, should it occur, will be released from the infiltration areas into the natural drainages outside of the mining disturbance boundary, similar to previous stormwater-management practices.	
Natural and other drainage channels will be kept free of equipment, wastes, stockpiles, and overburden?	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
If no, explain:	
25. RECLAMATION TOPOGRAPHY	
25A. Final Slopes	
Final slopes will be created using the cut-and-fill method?	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no
Explain procedure to be used:	
Slopes will be created by mining to the final slope using the cut method?	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
Explain procedure to be used: Final mined slopes will be cut during the mining process.	
Slopes will vary in steepness?	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
If no, explain:	
Slopes will have a sinuous appearance in both profile and plan view?	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
If no, explain:	
Large rectilinear (that is, right angle, or straight, planar) areas will be eliminated?	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
If no, explain:	
Where reasonable, tracks of the final equipment pass will be preserved and oriented to trap moisture, soil, and seeds, and to inhibit erosion?	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
If no, explain:	
25B. Slope Requirements for Pits and Overburden/Waste Rock Dumps (non-saleable products)	
<i>If the mine is a quarry or in hard rock, skip to Quarry section (25C).</i>	
Slopes will vary between 2 and 3 feet horizontal to 1 foot vertical or flatter, except in limited areas where steeper slopes are necessary to create sinuous topography and control drainage?	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
If no, explain:	
For pits, slopes will not exceed 2 feet horizontal to 1 foot vertical except as necessary to blend with adjacent natural slopes?	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
Give details: Final contours on Figure 5 show 2H:1V slopes draining to the final mine floor.	
Review "Additional Requirements for Mines with Steep or Potentially Unstable Slopes" in "Instructions for SM-8A".	
Slope stability analysis required?	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no
If yes, attach analysis.	
25C. Slope Requirements for Quarries and Hardrock Metal Mines	
<i>If mine is a pit in unconsolidated materials covered by Section 25B, go to Section 25D</i>	
Check the appropriate box(es)	
<input type="checkbox"/> Slopes will not exceed 2 feet horizontal to 1 foot vertical.	
<input type="checkbox"/> Slopes steeper than 1 foot horizontal to 1 foot vertical are an acceptable subsequent land use as confirmed on Form SM-6.	
<input type="checkbox"/> Hazardous slopes or cliffs are indigenous to the immediate area and already present a potential threat to human life. Photo and maps attached to document presence of cliffs.	
<input type="checkbox"/> Geologic or topographic characteristics of the site preclude slopes being reclaimed at a flatter angle and are an acceptable subsequent land use as confirmed on Form SM-6.	
Review "Additional Requirements for Mines with Steep or Potentially Unstable Slopes" in "Instructions for SM-8A".	

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Slope stability analysis required? If yes, attach analysis.	<input type="checkbox"/> yes <input type="checkbox"/> no
Measures will be taken to limit access to the top and bottom of hazardous slopes? Describe measures, or if no, explain:	<input type="checkbox"/> yes <input type="checkbox"/> no
Selective blasting will be used to remove benches and walls and to create chutes, buttresses, spurs, scree slopes, and rough cliff faces that appear natural? Blasting plan attached? If no, explain:	<input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> yes <input type="checkbox"/> no
Reclamation blasting will be used to reduce the entire highwall to a scree or rubble slope less than 2 feet horizontal to 1 foot vertical? Blasting plan is attached? If no, explain:	<input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> yes <input type="checkbox"/> no
Access to benches will be maintained for reclamation blasting? If no, explain:	<input type="checkbox"/> yes <input type="checkbox"/> no
Small portions of benches will be left to provide habitat for raptors and other cliff-dwelling birds?	<input type="checkbox"/> yes <input type="checkbox"/> no
25D. Backfilling	
The site will require backfilling? If no, skip to 25E. Maximum depth of backfilling is _____ feet.	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no
Backfill will be <input type="checkbox"/> onsite materials <input type="checkbox"/> imported materials <input type="checkbox"/> both Provide a written screening method that ensures importation of acceptable soil for reclamation.	<input type="checkbox"/> yes <input type="checkbox"/> no
Backfilling plan is attached? If no, explain:	<input type="checkbox"/> yes <input type="checkbox"/> no
Backfill stockpiles are shown on maps and will be marked on the ground with markers?	<input type="checkbox"/> yes <input type="checkbox"/> no
All grading/backfilling will be done with non-noxious, non-combustible, and relatively incompatible solids? If no, explain:	<input type="checkbox"/> yes <input type="checkbox"/> no
Backfill will require compaction? If no, explain:	<input type="checkbox"/> yes <input type="checkbox"/> no
Will you be backfilling to create slopes? Is slope stability analysis attached? If no, explain.	<input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> yes <input type="checkbox"/> no
25E. Mine Floors	
Flat areas will be formed into gently rolling mounds? If yes, give details. If no, explain: Post-mining commercial use will require a flat final mine floor.	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no
Mine floor will be gently graded into sinuous drainage channels to preclude sheetwash erosion during intense precipitation? If yes, give details. If no, explain: Post-mining commercial use will require a flat final mine floor. The floor will be covered with crushed rock in anticipation of commercial redevelopment.	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no
Mine floor and other compacted areas will be bulldozed, plowed, ripped, or blasted to foster revegetation? If yes, give details. If no, explain: Post-mining commercial use will require a firm subgrade; dozing and/or ripping are counter to this subsequent use.	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no
25F. Lakes, Ponds, and Wetlands	
Is water currently present in the area or will the mining penetrate the water table? If no, go to Section 25G.	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no

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Reclaimed areas below the permanent low water table in soil, sand, gravel, and other unconsolidated material will have a slope no steeper than 1.5 feet horizontal to 1 foot vertical? If yes, give details. If no, explain:	<input type="checkbox"/> yes <input type="checkbox"/> no
If not already present, soils, silts, and clay-bearing material will be placed below water level to enhance revegetation? If yes, give details. If no, explain:	<input type="checkbox"/> yes <input type="checkbox"/> no
Some parts of pond and lake banks will be shaped so that a person can escape from the water?	<input type="checkbox"/> yes <input type="checkbox"/> no
Armored spillways or other measures to prevent undesirable overflow or seepage will be provided to stabilize bodies of water and adjacent slopes? If yes, give details. If no, explain:	<input type="checkbox"/> yes <input type="checkbox"/> no
Wildlife habitat will be developed, incorporating such measures as: Sinuous and irregular shorelines? Varied water depths? Shallow areas less than 18 inches deep? Islands and peninsulas? Give details:	<input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> yes <input type="checkbox"/> no
Ponds or basins will: Be located in stable areas? Have sufficient volume for expected runoff? Have an emergency overflow spillway? Spillways and outfalls will be protected (for example, rock armor) to prevent failure and erosion? If any answers are no, explain:	<input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> yes <input type="checkbox"/> no
Proper measures will be taken to prevent seepage from water impoundments that could cause flooding outside the permitted area or adversely affect the stability of impoundment dams or adjacent slopes? If yes, give details. If no, explain:	<input type="checkbox"/> yes <input type="checkbox"/> no
Written approval from other agencies with jurisdiction to regulate impoundment of water is attached? If no, explain:	<input type="checkbox"/> yes <input type="checkbox"/> no
25G. Final Drainage Configuration	
Drainages will be constructed on each reclaimed segment to control surface water, erosion, and siltation? Result in essentially natural conditions of volume, velocity, and turbidity? Clean runoff is directed to a safe outlet? If yes, give details. If no, explain: Final drainage controls will manage stormwater while commercial development is initiated on reclaimed portions of the site. Commercial redevelopment plans will include stormwater controls designed and constructed in accordance with City of Chehalis development permits required after mining.	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no <input checked="" type="checkbox"/> yes <input type="checkbox"/> no <input checked="" type="checkbox"/> yes <input type="checkbox"/> no
Are these shown on maps?	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
26. SITE CLEANUP AND PREPARATION FOR REVEGETATION	
26A. Dealing with Hazardous Materials	
Hazardous materials are present at the mine site? <i>If no, go to Section 26B</i> The final ground surface drains away from any hazardous natural materials? If yes, give details. If no, explain:	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no <input type="checkbox"/> yes <input type="checkbox"/> no
Plan for handling hazardous mineral wastes indigenous to the site is attached? If no, written approval from all appropriate solid waste regulatory agencies attached?	<input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> yes <input type="checkbox"/> no

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26B. Removal of Debris	
All debris (garbage, 'bone piles', treated wood, old mining equipment, etc.) will be removed from the mine site?	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
All sheds, scale houses, and other structures will be removed from the site?	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
If either answer is yes, give details. If no, explain: All debris will be disposed of properly.	
27. REVEGETATION	
The mine site is in: <input type="checkbox"/> eastern Washington <input checked="" type="checkbox"/> western Washington	Revegetation area is: <input type="checkbox"/> wet <input checked="" type="checkbox"/> dry <input type="checkbox"/> both
The average precipitation is <u>52</u> inches per year.	
Revegetation will start during the first proper growing season (fall for grasses and legumes, fall or late winter for trees and shrubs) following restoration of mine segments?	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
If yes, give details. If no, explain: Final slopes will be seeded as final grades are achieved and during the proper growing season.	
The site will not be revegetated because:	
<input type="checkbox"/> It is a rural area with a rainfall exceeding 30 inches annually and erosion will not be a problem (requires approval of DNR).	
<input checked="" type="checkbox"/> Revegetation is inappropriate for the approved subsequent use of this surface mine.	
Explain: The final mine floor will remain unvegetated for commercial subsequent use.	
27A. Recommended Pioneer Species	
In the Sections below, check the species that will be planted at your mine site: <i>* indicates nitrogen-fixing species</i>	
Western Washington Dry Areas	
<input type="checkbox"/> alfalfa*	<input type="checkbox"/> lupine* <input checked="" type="checkbox"/> clover* <input checked="" type="checkbox"/> orchard grass
<input type="checkbox"/> cereal rye	<input checked="" type="checkbox"/> perennial rye <input type="checkbox"/> colonial bent grass <input type="checkbox"/> ponderosa pine
<input type="checkbox"/> creeping red fescue	<input type="checkbox"/> red alder* <input type="checkbox"/> Douglas fir <input type="checkbox"/> shore pine
<input type="checkbox"/> ground cover	<input type="checkbox"/> shrubs <input type="checkbox"/> other
Western Washington Wet Areas N/A	
<input type="checkbox"/> birdsfoot trefoil	<input type="checkbox"/> sedges <input type="checkbox"/> cedar <input type="checkbox"/> tubers
<input type="checkbox"/> cottonwood	<input type="checkbox"/> wetland grasses <input type="checkbox"/> creeping red fescue <input type="checkbox"/> willow
<input type="checkbox"/> red alder*	<input type="checkbox"/> other
Eastern Washington Dry Areas N/A	
<input type="checkbox"/> alder*	<input type="checkbox"/> grasses <input type="checkbox"/> alfalfa* <input type="checkbox"/> juniper
<input type="checkbox"/> black locust	<input type="checkbox"/> lodgepole pine <input type="checkbox"/> clover <input type="checkbox"/> lupine*
<input type="checkbox"/> deciduous trees	<input type="checkbox"/> ponderosa pine <input type="checkbox"/> shrubs <input type="checkbox"/> deep-rooted ground cover
<input type="checkbox"/> diverse evergreens	<input type="checkbox"/> other
Eastern Washington Wet Areas N/A	
<input type="checkbox"/> alder*	<input type="checkbox"/> cottonwood <input type="checkbox"/> poplar <input type="checkbox"/> sedges
<input type="checkbox"/> serviceberry	<input type="checkbox"/> tubers <input type="checkbox"/> willow
<input type="checkbox"/> other	
Give planting details (stems/acres of trees and shrubs, see Forest Practices manual ; lbs/acre of grass, legume, or forb mixture): No trees or shrubs will be planted in the reclamation area. Grass seed will be hydroseed applied in accordance with manufacturer erosion-control and revegetation specifications.	
Describe weed control plan: Invasive weeds will be managed by physical removal and/or application of herbicides, as needed, depending on the species and stage of growth.	

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27B. Planting Techniques	
Revegetation at this site will require:	
Ripping and tilling?	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no
Blasting to create permeability?	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no
Mulching?	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
Irrigation?	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no
Fertilization?	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
Importation of clay- or humus-bearing soils?	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no
Other soil conditioners or amendments?	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no
Give details: Mulch will be weed-free straw. Fertilizer will be incorporated into hydroseed mixture per manufacturer recommendations.	
Trees and shrubs will be planted in topsoil or in subsoil amended with generous amounts of organic matter?	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no
If yes, give details. If no, explain: No trees or shrubs are planned within the reclamation area.	
Mulch will be piled around the base of trees and shrubs?	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no
High quality stock will be used?	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no
Trees and shrubs will be planted while they are dormant?	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no
Stock will be properly handled, kept cool and moist, and planted as soon as possible?	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no
Seeds will be covered with topsoil or mulch no deeper than one-half inch?	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
If any answers are no, explain: No trees or shrubs are planned within the reclamation area.	
28. FINAL CHECKLIST	
All required maps are attached? (<i>See "Instructions for SM-8A" for detailed requirements.</i>)	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
All required cross sections are attached? (<i>See "Instructions for SM-8A" for detailed requirements.</i>)	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
Geologic map attached (if required)? (<i>See "Instructions for SM-8A" for detailed requirements.</i>)	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no
All documents submitted have the date, the name and address of the permit holder, and the application number?	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
Have you completed the SM-6 and has it been signed by the local jurisdiction?	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
Have you provided the SEPA checklist?	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
Have you provided a copy of the SEPA determination (DNS, MDNS, or DS)?	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no
Have you attached photographs (as needed)?	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
Are additional supplemental studies included?	<input type="checkbox"/> yes <input type="checkbox"/> no
If yes, check the appropriate box(es) below:	
<input type="checkbox"/> Archeological	<input type="checkbox"/> Geohydrologic
<input type="checkbox"/> Topsoil	<input type="checkbox"/> Flood plain
<input type="checkbox"/> Other	<input type="checkbox"/> Backfill
	<input type="checkbox"/> Conservational
	<input type="checkbox"/> Slope stability
	<input type="checkbox"/> Vegetation
Other permits required? <input checked="" type="checkbox"/> yes <input type="checkbox"/> no	
If yes, check the appropriate box(es) below:	
<input type="checkbox"/> Shoreline Permit	<input type="checkbox"/> Water Discharge Permit
<input type="checkbox"/> Air Quality Permit	<input checked="" type="checkbox"/> NPDS or General Discharge Permit
<input type="checkbox"/> Special or Conditional Use Permit	<input type="checkbox"/> Solid Waste Permit
	<input type="checkbox"/> Hydraulic Project Approval
	<input type="checkbox"/> Other

APPLICATION FOR RECLAMATION PERMIT AND PLAN

IDENTIFICATION OF LANDOWNER(S)

Identify names and addresses of all landowners. Provide written evidence of landowner approval of the extraction of minerals by surface mining methods and of the reclamation plan and/or provide the signature of all landowners below. If landownership has been severed between surface and mineral rights ownership, identify all affected mineral rights owner(s) and provide their approval. *(Attach signed copies of this page if more than one.)*

Print Name(s): Marc Conrad

Address(es): PO Box 293, Chehalis, WA 98531-0293

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March 8, 2024
Washington Geological Survey

APPLICANT ACKNOWLEDGMENT

By signing this application, the applicant acknowledges the following:

- **Application’s Information True.** The applicant verifies that all information on this application and reclamation plan is true.
- **Reclamation Plan Contents.** The applicant’s reclamation plan consists of this document (SM-8A), SM-6, associated maps, cross sections, reclamation narrative, and other attachments. The department’s approval of this application would reflect approval of the applicant’s reclamation plan.
- **Applicant/Permit Holder Must Comply.** If the department approves this application, the applicant shall be the permit holder and shall be responsible for compliance with Chapter 78.44 RCW, Chapter 332-18 WAC, the terms and conditions of the permit, and the approved reclamation plan and attachments. *The permit holder shall comply with the permit and may not significantly deviate from the reclamation plan without prior written approval by the department for the proposed change.* Revised permits or modified plans might be necessary following significant deviations.
- **Applicant/Permit Holder Consents to Inspection.** All permitted surface mines are subject to regular inspection. See RCW 78.44.161 and WAC 332-18-050. The applicant verifies that it has authority to consent to department inspections on behalf of itself and the landowner(s). *Applicant authorizes the department to enter and inspect any property covered by this application during any day or time determined necessary by the department to ensure compliance with the Surface Mining Act, Surface Mining Rules, the Reclamation Permit, and the Reclamation Plan.*

APPLICANT

Signature of surface mine permit applicant or applicant’s company representative

DocuSigned by:

 667F8146F452485...

Name and Title of Company Representative
 (Please print)

Marc Conrad Manager

Date signed

3/7/2024 | 9:46 PM PST

LANDOWNER(S)

As landowner, I Marc Conrad (name) authorize the applicant to extract minerals from my land using surface mining methods and I approve this reclamation plan.

Signature:

Date signed:

DocuSigned by:

 667F8146F452485...

3/7/2024 | 9:46 PM PST

FOR DEPARTMENTAL USE ONLY

Date accepted	Accepted by:	Title:	Reclamation Permit No.

APPENDIX B

DNR FORM SM-6 – COUNTY OR MUNICIPALITY APPROVAL FOR SURFACE MINING

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WASHINGTON STATE DEPT OF
NATURAL RESOURCES

**COUNTY OR MUNICIPALITY
APPROVAL FOR
SURFACE MINING
(Form SM-6)**

NAME OF COMPANY OR INDIVIDUAL APPLICANT(S) Same as name of the exploration permit holder. <i>(Type or print in ink.)</i> CB National LLC		TOTAL ACREAGE AND DEPTH OF PERMIT AREA (Include all acreage to be disturbed by mining, setbacks, and buffers, and associated activities during the life of the mine.) <i>(See SM-8A.)</i> Total area permitted will be <u>49</u> acres Maximum vertical depth below pre-mining topographic grade is <u>175</u> feet Maximum depth of excavated mine floor is <u>280</u> feet relative to mean sea level COUNTY <u>Lewis</u>																																
MAILING ADDRESS PO Box 293 Centralia, WA 98531-0293 Telephone 360-269-6000		No attachments will be accepted. Legal description of permit area: <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:15%;">1/4</th> <th style="width:15%;">1/4</th> <th style="width:15%;">Section</th> <th style="width:15%;">Township</th> <th style="width:15%;">Range</th> </tr> </thead> <tbody> <tr> <td>SW</td> <td>NW</td> <td>29</td> <td>14N</td> <td>2W</td> </tr> <tr> <td>NW</td> <td>SW</td> <td>29</td> <td>14N</td> <td>2W</td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>			1/4	1/4	Section	Township	Range	SW	NW	29	14N	2W	NW	SW	29	14N	2W															
1/4	1/4	Section	Township	Range																														
SW	NW	29	14N	2W																														
NW	SW	29	14N	2W																														
Proposed subsequent use of site upon completion of reclamation Commercial																																		
<p>RECEIVED March 8, 2024 Washington Geological Survey</p>																																		
Signature of company representative or individual applicant(s) DocuSigned by: 667F8146F452485...		Name and title of company representative <i>(please print)</i> Marc Conrad Manager		Date signed 3/7/2024 9:46 PM PST																														
TO BE COMPLETED BY THE APPROPRIATE COUNTY OR MUNICIPALITY:																																		
Please answer the following questions 'yes' or 'no'. 1. Has the proposed surface mine been approved under local zoning and land-use regulations?* 2. Is the proposed subsequent use of the land after reclamation consistent with the local land-use plan/designation?				<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 50%;">Yes</th> <th style="width: 50%;">No</th> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;">X</td> <td style="text-align: center;"> </td> </tr> </table>	Yes	No		X	X																									
Yes	No																																	
	X																																	
X																																		
When complete, return this form to the Department of Natural Resources. <i>*City of Chehalis does not have a permit to issue for surface mining.</i>																																		
Name of planning director or administrative official <i>(please print)</i> Ron Buckholt		Address 1321 S. Market Blvd Chehalis, WA 98532																																
Signature 																																		
Title <i>(please print)</i> City Planner																																		
Telephone 360-485-0373		Date 3/8/24	FOR DEPARTMENT USE ONLY:																															
			DNR Reclamation Permit No. 70-012953																															

EXPANDED RECLAMATION PERMIT APPLICATION

CHEHALIS HILL

Permit Holder:

CB National LLC

Operator:

CB National LLC

Mailing Address:

PO Box 293
Centralia, WA 98531-0293

Physical Location:

1300 N National Avenue
Chehalis, WA 98532
Lewis County

Facility Contact:

Marc Conrad
T: (360) 269-6000

November 1, 2024

Submitted To:

Washington State Department of Natural Resources
Washington Geological Survey
Permit #70-012953

Prepared by:



17600 Pacific Highway, Unit 357
Marylhurst, Oregon 97036

Project: 020.02.01

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November 1, 2024
Washington Geological Survey

1.0 INTRODUCTION

On behalf of CB National LLC, Fulcrum GeoResources LLC (Fulcrum) has prepared this expanded reclamation permit application for the DNR Washington Geological Survey Surface Mine Reclamation Program intended to satisfy DNR requirements pursuant to Chapter 78.44 Revised Code of Washington. This reclamation permit application includes this narrative, Figures 1 through 6, and the following appendices:

- Appendix A – DNR form SM-8A, Application for Reclamation Permit
- Appendix B – DNR form SM-6, County or Municipality Approval for Surface Mining
- Appendix C – SEPA Environmental Checklist, March 7, 2024
- Appendix D – Revised Geotechnical Report, GeoEngineers, Inc., September 17, 2004
- Appendix E – General Acceptance Requirements for Import Material
- Appendix F – General Import Material Information Form
- Appendix G – Stormwater Calculations

Acronyms and abbreviations used herein are defined in Section 9.0 of this narrative.

2.0 SITE DESCRIPTION

2.1 SITE LOCATION

The Chehalis Hill mine (formerly called Conwell Hill) is located in the City of Chehalis northeast of the main city center. Access to the site is off of N National Avenue via an existing gravel roadway entrance. The mine permit area is in the NW ¼ of the SW ¼ and the SW ¼ of the NW ¼ of Section 29, Township 14 North, Range 2 West, Willamette Meridian and includes tax parcels 005551002000, 005619002000, 005619003000, 005625005000, and 005625006000 (Figures 1 and 2).

2.2 BACKGROUND

The site is located on a ridge northeast of the City of Chehalis between National Avenue and Coal Creek Road. Elevations range from approximately 460 feet MSL at the top of the ridge to 210 feet MSL where the site abuts National Avenue. Mining has occurred at the site for many years. The permit area was most recently expanded in 2004 to 11.4 acres. Past mining resulted in removal of vegetation, resource extraction, and placement of storage piles of excavated soil and resource material. The mine site has been idle for several years, resulting in significant revegetation of formerly disturbed areas by trees and brush. The existing conditions and current mine layout are shown on Figure 3.

The proposed expansion consists of increasing the permitted acreage from 11.4 acres to 49 acres. The site extracts sedimentary bedrock for use as borrow material for commercial fill for local construction projects. Commercial access will continue to be located off of National Avenue in accordance with past mining.

2.3 SUBSEQUENT USE

Based on correspondence with the City Planner, the City does not address mining in its zoning or development ordinance and defers to DNR with regard to mine permitting of the property. The planned subsequent use of the site is commercial development, which is compatible with the General Commercial zoning of the site. The attached SM-6 (Appendix B) indicates the City does not have a mine permit to issue and that the proposed subsequent use of the site is compatible with the underlying zoning. As such, DNR will need to conduct a SEPA review for the permit expansion. A SEPA checklist for the expansion is provided in Appendix C.

3.0 GEOLOGY AND HYDROGEOLOGY

3.1 GEOLOGY

A geotechnical study was completed by GeoEngineers, Inc. for the 2004 permit expansion including observations of subsurface explorations and mapping geologic structures in exposed bedrock. Their geotechnical report is provided in Appendix D. The bedrock underlying the site is identified as the late Eocene Skookumchuck Formation (about 35 million years old), consisting of interbedded marine sandstone and siltstone with coal beds. This is consistent with geologic mapping by DNR and by Snavely et al. (1958). Based on observed structural dip in outcrop and from recovered core, the sedimentary strata strike at approximately 270 to 290 degrees azimuth and dip 45 degrees to the south.

Fulcrum conducted a site reconnaissance on November 6, 2023, to observe more recent exposures of the bedrock toward the top of the ridge in roadcuts and mined excavations. The exposed strata consist of fine to medium, friable, and cross-bedded sandstone with thin beds of indurated siltstone often occurring as discontinuous lenses. Observed dip was to the south at 45 to 50 degrees, consistent with the findings from the GeoEngineers geotechnical report.

3.2 HYDROGEOLOGY

Groundwater is also discussed in the geotechnical report (Appendix D). Groundwater was not reported in the onsite borings to a depth of about 35 feet BGS (down to 255 feet MSL), nor by other engineering reports prepared prior to the GeoEngineers report (discussed in their report). Water well logs are not available from the Washington Department of Ecology for the site area. The bedrock ridge is relatively narrow and has limited area to capture precipitation that could lead to a significantly elevated groundwater table above the surrounding landscape, which is about 190 to 200 feet MSL.

A non-fish bearing stream (Type N) is located southeast of the site outside of the project. Several vegetated drainages run east from the site. Water ultimately flows into Coal Creek more than 600 feet northeast of the site.

No wetlands or natural ponds are located on the subject property, based on the National Wetlands Inventory. There are several man-made basins located in the current mine area that capture and infiltrate stormwater runoff. Fulcrum observed that these basins were all mostly dry

on November 6, 2023, after several days of significant rainfall, indicating the basins still effectively infiltrate runoff.

3.3 LANDSLIDES

Landslide mapping from the DNR's Washington Geologic Information Portal does not map any landslides on the property. Lidar hillshade imagery suggests there are slope failures located along the Type N stream southeast and east of the site, mostly at elevations ranging from 360 to 290 feet MSL, and near a bend in NE Taylor Avenue off of Coal Creek Road northeast of the site at about 240 feet MSL. These areas of suspected landsliding appear to be associated with historical road grading and fill placement several hundred feet east of the site. In particular, the slides in the Type N stream are downstream of a historical reservoir located at the head of the valley, which would have required significant fill to build a wide road grade that has since failed into the valley and likely influenced the downstream slides.

A small slump previously slid down onto National Avenue from the northwest portion of the site, apparently from fill placement along a cut bench at about 280 feet elevation. The slope was stabilized, and additional erosion has not been observed in the area. Mitigations to avoid slope instability from future mining are discussed in Section 4.0 below. Discussion of stormwater management and its implications on slope stability is included in Section 5.0.

4.0 MINING AND RECLAMATION

The expanded permit boundary for this site includes 49 acres, approximately 36 of which will be disturbed by mineral extraction. Approximately 3 acres within the permit boundary have been previously disturbed by mining operations, based on the DNR Inspection Report dated May 2, 2023 and a site meeting with the DNR inspector on August 13, 2024 (Figure 3). The anticipated overall mining disturbance is shown on the reclamation sequence map on Figure 4 and the final topography map on Figure 5. Cross sections showing existing and final topography are provided on Figure 6.

Mining-related activities will consist of soil excavation and storage in piles; extraction and temporary stockpiling of bedrock resource material; hauling to and from the operations area; and operation of earthwork equipment. Mining will occur in two segments advanced from the top of the ridge downward (Figures 4 and 6). Segment M-1 will be excavated to elevation 350 feet MSL, and segment M-2 will be excavated to elevation 280 feet MSL, which will be the final mine floor. The maximum depth of mining at any given point is approximately 175 feet BGS and occurs between the elevations of 455 and 280 feet MSL. Mining is projected to occur over the next 20 years and will involve the removal of approximately 4,396,000 cubic yards of material.

Soil storage piles and resource stockpiles taller than 4 vertical feet will be located away from the edge of and will not be placed on slopes steeper than 3H:1V to avoid creating surcharge loads and slope instability. Such material piles will be located at least as far away from the slope edge as the pile height.

Sinuuous post-mining slopes will be constructed during mining operations and will not exceed 2H:1V using a cut-slope method of mining. Figure 5 illustrates the final configuration of the reclaimed mine area upon completion of mining activities.

Reclamation will occur as final slopes are progressively created during mining and at the completion of mining in accordance with the reclamation sequence map shown on Figure 4. Final slopes will be capped with subsoil and topsoil then revegetated as described in the following sections. The final mine floor will receive a layer of crushed rock for commercial subsequent use of the site.

4.1 TOPSOIL AND SUBSOIL PLAN

The U.S. Department of Agriculture Natural Resources Conservation Service maps soils at the site consisting mostly of Buckpeak silt loam (30 to 65 percent slopes) with Melbourne loam (0 to 8 percent slopes) along the ridge top and a thin area of Scamman silty clay loam (5 to 15 percent slopes) in the northeastern-most site. An additional soil unit labeled "Pits" is mapped due east of National Avenue, which is apparently from prior mining of the site. Buckpeak soils are reported having a typical profile of 8 inches of combined O and A horizons overlying 36 inches of B horizons. Melbourne soils have a typical soil profile consisting of 4 inches of A horizon overlying more than 60 inches of B horizons.

Topsoil depth observed on site is approximately 0 to 8 inches based on observations of previously mined outcrops and roadcuts. Subsoil depth also ranges from 0 to 8 inches. Topsoil and subsoil will be salvaged together and will generally be stored in designated areas during active mining and in conjunction with contemporaneous reclamation. Soil storage piles will be placed away from the edge of slopes steeper than 3H:1V as described above. Approximately 54,000 cubic yards of combined topsoil and subsoil will be available for reclamation. This is enough to place at least 12 inches of subsoil and 12 inches of topsoil over the final reclaimed slopes. Access roadways and the mine floor will not receive subsoil or topsoil for the intended subsequent use as commercial development. Instead, the final mine floor will receive a layer of crushed rock.

4.2 IMPORTATION PLAN AND CLEAN SOIL POLICY

While a shortage of topsoil is not anticipated, in the event that topsoil and subsoil are in short supply to reclaim the site, clean topsoil and subsoil from nearby construction sites will be imported for reclamation. This section describes the procedures and processes for the acceptance of clean soil to be imported onto the mine site. Importing of permitted material is controlled through customer notifications, the on-site reclamation screening process, and restricted site access. Mine personnel shall receive training regarding the type of material accepted at the mine site and operating procedures for managing the material.

Unacceptable material for importation includes but is not limited to the following: contaminated material as defined by the Washington Model Toxics Control Act unrestricted land use cleanup criteria (173-340 Washington Administrative Code), material that contains

hazardous substances, material from a designated environmental cleanup site, reinforced concrete, wood waste, and construction or demolition debris.

Customer notification includes signs posted at all entrances to the mine indicating the name of the mine site, emergency telephone number, hours and days of operation, and description of unacceptable material allowed on the site. Traffic control and safety requirements are also located near the entrance if necessary. Unacceptable materials delivered to the site are the responsibility of the party delivering the material. The generators and transporters of imported material retain responsibility for prohibited material detected in their loads. Generators and haulers who use the site for importing clean soil are notified of these conditions using notices, contracts, signs, and verbal communication.

The majority of the material accepted at the site will be clean soil generated from construction projects in the area. To the extent possible, soil quality information should be obtained before the material is received at the mine site. Appendix E presents information regarding what type of material is acceptable. The material source verification procedure requires a General Import Material Information Form (Appendix F) be included with each load of material imported on site. The form must be completed by the hauler and the information on the form reviewed by the appropriate mine personnel before the material is accepted. Electronic or paper copies of the forms shall be retained at the facility for the life of the operation.

Importers must disclose whether the source location for the material may impact the quality of material. For example, soil from a previously undeveloped area would typically have less potential for contaminants, while soil from an urban redevelopment project would typically have a higher potential for contaminants. When appropriate, the mine operator will direct the importer to provide soil quality data before the material is accepted.

The mine operator will adhere to the following material screening and acceptance procedure to detect and prevent unacceptable material from being placed on the premises of the mine site. Upon entering the premises, haul trucks with clean soil will be directed to check in with mine staff. Staff will fill out a ticket indicating the trucking company and truck number, material source, and quantity of imported material. The volume of material shall be recorded on the ticket. The staff person will then conduct a visual check of each incoming load. Acceptable material will be directed to a designated area for disposal. If unacceptable material is suspected, mine staff will instruct the hauler to remove the unacceptable material from the site. Material containing unacceptable waste (wood waste, excess concrete, etc.) and material suspected of containing contaminants will be rejected.

If contamination is suspected within a load that has been dumped on site, the mine operator may direct the transporter to remove the material or require sampling and laboratory testing. The testing is based on field observations (e.g., odor and staining) and other information that may be available regarding the source of the soil. Testing may include but should not be limited to total petroleum hydrocarbons such as gasoline, diesel, and oil. As appropriate, soil may also be subjected to testing for metals and volatile organic compounds such as benzene, toluene,

ethylbenzene, and xylenes. If laboratory testing indicates that the material is unacceptable, the importer shall be directed to return to the site and retrieve the material at their expense. Records of laboratory analyses performed on imported material or materials that have been received shall be kept in a designated location for the life of the operation.

The mine operator reserves the right to reject any material delivered. The ability to reject material is clearly stated in the acceptance information provided to the importing party. The material may be rejected outright based on lack of information, observations made, or testing performed by the mine operator. All costs associated with rejected loads shall be paid by the importing party. Exceptions to the material acceptance procedures are subject to internal review and documentation by mine personnel and concurrence with outside consultants; approval by DNR may be required if appropriate.

4.3 SETBACKS

Setbacks of 30 feet are established and will be maintained around the permit boundary. Setbacks are shown on Figures 3 through 6. Some disturbance such as for access roads or topsoil storage may occur in setback areas and will be reclaimed along with the rest of the completed mine site unless the access routes are necessary for post-mining site use.

5.0 EROSION CONTROL AND STORMWATER MANAGEMENT

5.1 EXISTING STORMWATER

Stormwater runoff within the limits of extraction is controlled via cut slope and mine floor sloping, which direct runoff to infiltration basins. Sediment traps, ditches with rock check dams, and other best management practices are used as needed to reduce erosion and sediment loads to the infiltration areas. The main infiltration basin is located in the south-central part of the mine (Figure 3). An emergency spillway leads to an 18-inch outlet pipe and then to the natural drainage east of the current mine disturbance. Additional infiltration basins are located throughout the site to manage runoff from other mining disturbance or from access roads.

5.2 FUTURE MINING STORMWATER

Ongoing mining will continue to use the methods described above to direct runoff from disturbed areas back into the active (incised) mine and designated stormwater infiltration areas. Slopes outside of active mining will remain undisturbed and vegetated to minimize the area needed for stormwater management. Unimpacted stormwater will continue to infiltrate into forested slopes, run downslope via swales and drainages, or be transpired through forest plants.

The disturbed area will gradually expand as mining progresses downward, with a corresponding increase in the required areas for infiltration. Initially, infiltration basins will be located in the interior of the extraction area similar to the existing site. Later, infiltration basins and swales will be located at the foot of cut slopes around the perimeter of the mine floor. This relationship will help maintain infiltration at an interior position through the life of the mine, mitigating the potential for excess porewater buildup from infiltration to adversely affect slope stability outside the mine. Also, the depth of infiltration will gradually lower along with the mine. When the

mine is close to its ultimate depth, infiltration will occur below the elevation of the landslides located southeast of the site.

The balance of stormwater on the mined site will progressively shift to be dominantly managed via infiltration. Surface runoff from the southeast site will be directed back into the extraction area for infiltration, which should reduce the amount of surface water flowing southeast into the drainage affected by landsliding and have a positive effect on slope stability. The northeast drainage will continue to have a surface connection to the mine floor in case there is excess runoff from infiltration areas. However, this would be a relatively minor component of the total stormwater volume that is otherwise infiltrated and should be similar to the surface runoff currently experienced in this drainage. As such, there should be an overall benefit to slope stability along the northeast drainage as well.

In addition to the preceding considerations and measures, topsoil and subsoil storage piles reserved for reclamation will be seeded with an erosion control seed mix to stabilize the piles and prevent erosion.

5.3 POST-MINING STORMWATER

At completion of reclamation, stormwater will be captured in the mined excavation and conveyed to designated infiltration swales and basins located along the base of final slopes. Excess runoff, should it occur, will be released from the infiltration areas into the natural drainages outside of the mining disturbance boundary, similar to previous stormwater-management practices. The infiltration areas shown on Figure 5 are based on conservative assumptions at final mine-floor elevation (Appendix G). Final infiltration areas will be sized and adjusted based on infiltration testing in the final mine floor once exposed.

6.0 REVEGETATION PLAN

Post-mining use of the site for commercial development will require the slopes to be revegetated for erosion control. The mine floor will not be revegetated to facilitate redevelopment. Seeding using the seed mix listed in Table 1 or similar can be applied by broadcasting or hydroseed at 50 pounds per acre. Fertilization at a rate of 200 pounds per acre of 12-24-24 (or comparable blend) can also be broadcast-applied at the same time the seed is sown. Invasive, noxious, and deleterious weeds will be controlled manually or with herbicide to prohibit their invasion and allow planted species to establish.

Table 1. Slope Revegetation Plan

Species Common Name	Scientific Name	Percent	Seeding Season
Big bluegrass	<i>Poa ampla</i>	5%	spring/fall
Columbia brome	<i>Bromus vulgaris</i>	20%	spring/fall
Orchard grass	<i>Dactylis glomerata</i>	20%	spring/fall
Timothy	<i>Phleum pratense</i>	10%	spring/fall
Tall fescue	<i>Festuca arundinacea</i>	10%	spring/fall
W. Dutch clover	<i>Trifolium repens</i>	25%	spring/fall
Ladak alfalfa	<i>Medicago sativa</i>	5%	spring/fall
Burnet	<i>Sanguisorba sp.</i>	5%	spring/fall

7.0 REFERENCES

Snavely, P.D., Brown, R.D., Roberts, A.E., Rau, W.W., 1958, Geology and Coal Resources of the Centralia-Chehalis District Washington: US Geological Survey, Bulletin 1053, 159 p., 13 plates.

U.S. Department of Agriculture Natural Resources Conservation Service, n.d. Web Soil Survey. Retrieved from <https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>.

U.S. Department of Fish and Wildlife, n.d. National Wetlands Inventory. Retrieved from <https://fwsprimary.wim.usgs.gov/wetlands/apps/wetlands-mapper>.

Washington State Department of Ecology, n.d. Washington State Well Report Viewer. Retrieved from <https://appswr.ecology.wa.gov/wellconstruction/map/WCLWebMap/default.aspx>.

Washington State Department of Natural Resources, n.d. Forest Practices Application Mapping Tool (FPAMT). Retrieved from <https://fpamt.dnr.wa.gov/2d-view#activity?-14866370,-12518225,5386282,6661863>.

Washington State Department of Natural Resources, n.d. Washington Geologic Information Portal. Retrieved from <https://geologyportal.dnr.wa.gov/>.

8.0 LIMITATIONS

The services described in this narrative were provided consistent with generally accepted professional consulting principles and practices. Our narrative, conclusions, and interpretations should not be construed as warranty of the subsurface conditions and are not applicable to areas other than the subject site. This narrative is prepared solely for the use of our client and may not be used or relied upon by a third party for any purpose. Any such use or reliance will be at such party's risk.

The opinions and recommendations contained in this narrative and attachments apply to conditions existing when services were performed. Fulcrum GeoResources LLC is not responsible for the impacts of changes in environmental standards, practices, or regulations after the date of this narrative. Fulcrum GeoResources LLC does not warrant the accuracy of information that was supplied by others as incorporated in this permit application.

Our interpretations of the mining and geologic conditions are based on discussions with the client, review of publicly available information, exposures of soil and rock within the mine area, and subsurface explorations conducted by others. The accuracy of outside information is beyond our control. Exploration observations indicate soil and rock conditions only at specific locations and only to the depths penetrated. They do not necessarily reflect soil, rock, or water level variations that may exist between exploration locations. If subsurface conditions differing from those described are noted during the course of excavation, re-evaluation will be necessary.

Within the limitations of scope, schedule, and budget, our services have been executed in accordance with generally accepted practices in this area at the time this narrative was prepared. No warranty, express or implied, should be understood.

9.0 ACRONYMS AND ABBREVIATIONS

BGS	below ground surface
DNR	Washington State Department of Natural Resources
H:V	horizontal to vertical
MSL	mean sea level
SEPA	Washington State Environmental Policy Act

Document ID: 020.02.01_2024-11-01_DNR permit_v3.docx
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APPENDIX E

GENERAL ACCEPTANCE REQUIREMENTS FOR IMPORT MATERIAL

RECEIVED
March 8, 2024
Washington Geological Survey

APPENDIX E

GENERAL ACCEPTANCE REQUIREMENTS FOR IMPORT MATERIAL

To ensure that unacceptable materials are not imported at the Chehalis Hill Pit, the following general conditions shall be applied to all incoming soil material. Material that meets these general conditions will be further evaluated by using the General Import Material Information Form.

1. ACCEPTABLE MATERIALS
 - Native wet or dry soil and clean, uncontaminated dirt, clay, silt, and sand

2. UNACCEPTABLE MATERIALS
 - Asphalt or concrete grindings
 - Cold mix asphalt
 - Garbage, organics (e.g., wood waste and tree stumps), demolition or construction waste, plastics, rubber or tires, and other waste material
 - Hazardous substances or contaminated material as defined in RCW Chapter 70.105D and WAC Chapter 173-350-410 (Inert Waste Landfills)

3. MATERIALS DELIVERED DETERMINED TO BE UNACCEPTABLE

The quarry operator/owner reserves the right to reject any material delivered. The material may be rejected outright based on lack of information, observations made, or testing performed by mine personnel. All costs associated with rejected loads shall be paid by the importing party. If contamination is suspected with a load that has been dumped, mine personnel may either direct the transporter to remove the material or require sampling and laboratory testing. The testing is based on field observations (e.g., odor and staining) and any other information that may be available regarding the source of the soil. Testing may include but should not be limited to total petroleum hydrocarbons such as gasoline, diesel, and oil. As appropriate, soil may also be subjected to testing for metals and volatile organic compounds such as benzene, toluene, ethylbenzene, and xylenes. If laboratory testing indicates that the material is unacceptable, the importer shall be directed to return to the site and retrieve the material.

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APPENDIX F

GENERAL IMPORT MATERIAL INFORMATION FORM

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APPENDIX F

GENERAL IMPORT MATERIAL INFORMATION FORM

Material Owner

Name:	
Address:	
Contact:	
Phone:	
Title:	

Soil Removal Contractor

Company Name:	
Company Address:	
Contact:	
Phone:	
Driver's License No.:	

Site Information

Site Address:	
Site Description:	
Material Description:	
Residential	
Commercial/ Industrial	
Rural	
Roadway	
Other	

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