



Responsiveness Summary

Holcim Inc. Site

September 3 – October 19, 2015 Public Comment Period

Draft Cleanup Action Plan, Consent Decree, SEPA DNS and Checklist

**Prepared by
Washington State Department of Ecology
Eastern Regional Office
Toxics Cleanup Program
Spokane, WA
Cleanup Site ID No. 4580
Facility Site ID No. 5216416**

October 27, 2015

The Washington Department of Ecology (Ecology) held a public comment period from September 3 through October 19, 2015 for the draft Cleanup Action Plan (dCAP), Consent Decree (CD), SEPA Checklist, and Determination of Non-significance (DNS) for the Holcim Inc. Site (Site). A public meeting was held on September 23, 2015. The purpose of the meeting was to provide the public a presentation of Ecology's proposed cleanup alternative for the Site. It also provided an opportunity for the public to ask questions about the proposal and cleanup project in general.

The Site is owned by Holcim (US) Inc., the City of Spokane Valley, and Neighborhood, Inc. The purpose of the dCAP is to present Ecology's proposal for final cleanup of the Site, subject to public review. The CD is the legal document negotiated between Ecology and the Potentially Liable Persons (PLPs) that requires the cleanup to occur. The SEPA checklist documents any adverse environmental impact due to the construction of the cleanup remedy. The lack of negative environmental impact is documented in the DNS.

The purpose of this Responsiveness Summary is to document Ecology's responses to comments submitted to Ecology during the public comment period.

Ecology would like to thank all those who provided comments.

One comment letter was submitted during the public comment period. Based on the comments received, no changes will be required to the documents under review; however several comments will help guide construction of the remedy as outlined in the responses below.

The Responsiveness Summary is organized as follows:

- Comment E-mail with letter attached, received from Mr. Alexander J.W. Scott of Gonzaga University School of Law on behalf of the Spokane Riverkeeper, The Lands Council, and Spokane Falls Trout Unlimited on October 19, 2015
 - Response to the Spokane Riverkeeper, The Lands Council, and Spokane Falls Trout Unlimited's comments

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October 19, 2015

VIA U.S. Mail

Jeremy Schmidt, P.E.
Cleanup Site Manager, Holcim Inc.
WA Department of Ecology
4601 North Monroe
Spokane, Washington 99205

RE: Comment on Holcim Site Draft Cleanup Action Plan

Dear Mr. Schmidt:

This letter is sent on behalf of the Spokane Riverkeeper, The Lands Council, and Spokane Falls Trout Unlimited to comment on the Draft Cleanup Action Plan ("DCAP") for the Holcim, Inc. Site ("Holcim").

Spokane Riverkeeper ("Riverkeeper") is a program of the Center for Justice ("CFJ"). CFJ is a not-for-profit legal organization which provides legal services to individuals and public interest organizations in the Inland Northwest. Riverkeeper conducts surveillance of the Spokane River and its tributaries and reaches out to river users who share its commitment to a river that is swimmable, fishable, and properly regulated. To further these goals, Riverkeeper actively seeks federal and state agency implementation of the Clean Water Act and, when necessary, directly initiates enforcement actions on behalf of itself and the public.

The Lands Council is a not-for-profit conservation group dedicated to protecting the quality of life and the environment in the Inland Northwest. The Lands Council is concerned about the environment's effect on people's health and works to protect thousands of acres of public land in order to maintain a clean and healthy environment. These lands include forests, water, and wildlife, including but not limited to the Spokane River Watershed. The Lands Council collaborates with a broad range of interested parties including communities, businesses, recreational groups, government agencies, and elected officials to seek smart and mutually respectful solutions to environmental issues. When necessary, The Lands Council uses litigation to protect forests and waters on behalf of its members and the public. The Lands Council seeks to enforce environmental rules necessary to ensure a clean and healthy environment.

The Spokane Falls Chapter of Trout Unlimited is a non-profit with a mission to conserve, protect and restore North America's coldwater fisheries and their watersheds.

The Holcim site is comprised of approximately 24 acres of land owned mainly by Holcim, Inc., and in part by the City of Spokane Valley. The site is near a shoreline of statewide significance (the Spokane River) as defined and governed by the Shoreline Management Act (SMA) 90.58 RCW. Through studies by Ecology, around 125,000 cubic yards of soil at Holcim was found to contain arsenic, cadmium, and lead at levels greater than the standards allowed through the Model Toxics Control Act ("MTCA"). Holcim also has shown to have high pH levels, which is characterized as dangerous waste pursuant to 173-303 WAC. Additionally, groundwater beneath the site was found to contain arsenic at levels higher than allowed through MTCA. These contaminants are a result of the cement kiln dust ("CKD") that Holcim produced during its operations.

Ecology has called for a cleanup of the contaminants at Holcim. Last year, Ecology identified five remedial alternatives ranging from complete removal of the contaminated soil to a capping of the contaminated soil or some hybrid of both. In its draft cleanup action plan (DCAP), Ecology recommended a modified option 4, with general provisions listed below:

- The selected cleanup action for the Site includes the relocation of CKD and contaminated soil from the City property to the Holcim property with the Holcim CKD, the removal and off-site disposal of contaminated soil on the Holcim property not associated with CKD, and the removal of contaminated soil from the Neighborhood, Inc. property to either be placed with the Holcim CKD or disposed of off-site.
- The combined Holcim, City, and possibly Neighborhood, Inc. CKD-related material would be re-graded to ensure that all CKD and contaminated soil was at least 10 feet away from the property boundary, 200 feet from the 100-year floodplain of the Spokane River, and 200 feet from the Irvin Water District Well.
- A low-permeability composite engineered cover system would be installed over the CKD material on the Holcim Property. The cover system would consist of the following layers, at a minimum, from the cover surface down to the graded CKD: Two feet topsoil, geotextile, one foot drainage material, and a geomembrane that is compatible with CKD with a minimum of 30-mil thickness, or a greater thickness that is commensurate with the ability to join the geomembrane material. The cover system would be vegetated with native grasses (or other Ecology-approved surface treatment) and maintained for perpetuity, and would thus require a restrictive covenant be placed on the deed for the Holcim property. Institutional controls that restrict access to the engineered cover system and to readily identify its location would be required. The underlying CKD and cover system would be required to be graded such that any precipitation that entered the soil and drainage layer, or precipitation that ran off the surface of the cover, would be collected and appropriately managed on Holcim's property.
- After visual confirmation that all CKD at the City property has been excavated and confirmational sampling indicating that all contamination associated with the CKD on the City property has been removed, the excavation would be backfilled with clean soil and planted with appropriate native plant species.

- Contaminated soil on the Neighborhood, Inc. property would be excavated and transported to an appropriate off-site disposal facility or be placed with the CKD material to be covered on Holcim's property. If dangerous waste related to CKD is encountered on this property, it could either be transported and disposed of at an offsite facility permitted to accept the waste, or it could be placed with the CKD material to be covered on Holcim's property. After confirmational sampling indicates that all contamination above cleanup levels on Neighborhood, Inc.'s property has been removed, the excavations will be backfilled with clean soil.
- Contaminated soil on Holcim's property not associated with CKD would be excavated and transported to an appropriate off-site disposal facility. After confirmational sampling indicates that all contamination above cleanup levels within these locations has been removed, the excavations may be backfilled with clean soil.
- Compliance monitoring will take place, and will be established in a Compliance Monitoring Plan to be submitted to Ecology for review and approval in conjunction with Engineering Design Plans. As mentioned above, confirmational monitoring will be required at areas where the remedy requires excavation of contaminated material and/or CKD. Protection monitoring will involve dust control during any work with contaminated soil. Performance monitoring will involve periodic visits to the capped area to ensure that the integrity of the cap has not been compromised; the frequency and requirements of these visits will be documented in the Operation and Maintenance Plan.

COMMENT 1

We strongly endorse option 1, which involves total removal of all CKD from the Holcim site. As Ecology is well aware, the deposits are hazardedly close to the Spokane River and the Spokane Valley Rathdrum Prairie aquifer, making them a potential danger to public health under even the best containment circumstances. Option 1 would be the most secure in terms of ensuring the long term safety and security of our SVRP aquifer, and by extension our Spokane River. However, given that option 1 may prove impractical, we would endorse option 4 as a second choice.

Ecology's mission is to "protect, preserve and enhance Washington's environment, and promote the wise management of our air, land, and water for the benefit of current and future generations." Our goals are not dissimilar. With regard to Holcim, we believe it is essential that the contaminants are neutralized in such a manner that they will no longer pose a threat to the health and human safety of the citizens of Spokane County as well as the environment in the immediate and distant future. Where generally, removal of the soil containing the contaminants would be the most effective method of ensuring this goal, Holcim provides a unique opportunity to rehabilitate an area of Spokane Valley back to its natural habitat through other methods.

With regards to our second choice, modified option 4, as presented, we would like to mention a few items that should be considered as the cleanup process moves forward.

Impermeable Cap

COMMENT 2

Due to the unconsolidated and reactive nature of CKD at Holcim, an impermeable cap is appropriate to reduce the atmospheric water contact that will, over time, leach inorganic constituents out of the CKD and into shallow groundwater and the adjacent Spokane River. A compacted clay liner would be an appropriate sub-layer within the contemplated cap that would not appreciably increase the cap construction costs but provide meaningful separation between the CKD and acidic atmospheric waters and reduce the off-pile transport of inorganic constituents into down gradient shallow groundwater and the Spokane River.

Cap Stormwater Engineering Controls

COMMENT 3

Precipitation events in Eastern Washington are difficult to predict but not difficult to prepare for if engineered properly. As currently envisioned, the cap would not include any proactive stormwater management features. Since the final CKD mound is anticipated to have a significant elevation gain from the surrounding floodplain, it is likely that stormwater, if not channeled and engineered during design, and without proper maintenance over the life of the cap, will reduce the effectiveness of the cap and could result in cap failure. Engineering controls in the form of detention ponds, swales, and other diversion and water management control would increase the health of the cap as well as extend the life of the cap. While maintenance will be required to keep unwanted vegetation from taking hold on the cap during post-closure, including additional resources to ensure that stormwater is properly managed will increase the effectiveness of the cap design and decrease the likelihood of rills, channelization, and CKD exposure and loss to surface water bodies as a result of heavy stormwater events.

Vegetative Rehabilitation of the Land

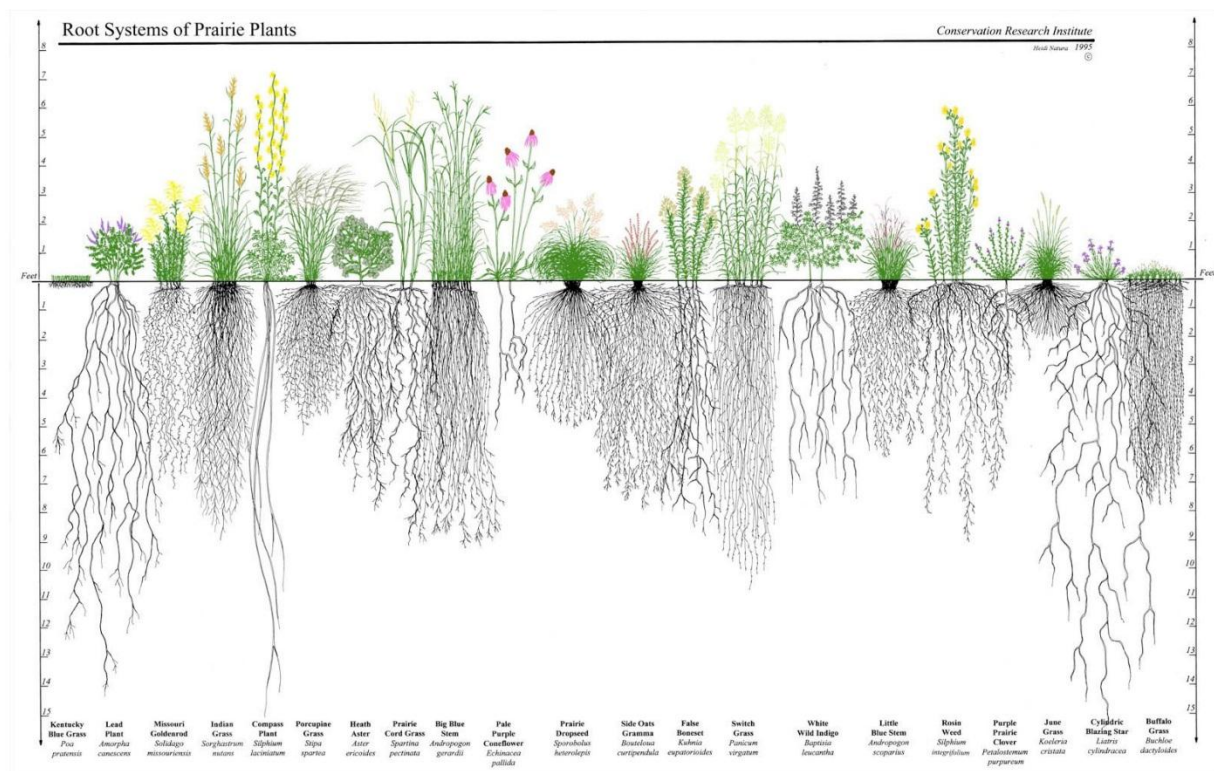
COMMENT 4

The Holcim project provides an opportunity for Ecology to rehabilitate some of the land that has been ecologically compromised due to past industry practices. Given its location and proximity to the Centennial Trail, the Spokane River, and other forms of public exposure, we request that Ecology reintroduce native vegetation upon the land for both aesthetical purposes as well as for “net gain” of ecological function.¹ In doing so, Ecology is showing its commitment to enhancing Washington’s environment instead of simply settling with the minimum standards to get by. The FRTR Remediation Technologies Screening Matrix and Reference Guide identified that “[v]egetative cover reduces soil moisture via plant uptake and evapotranspiration. Plant cover also limits soil erosion. Vegetative cover is more stable because it emphasizes use of natural materials and configurations, which implies longevity. Any and all rehabilitation of the property must conform with all requirements of the Washington Shoreline Management Act and the Spokane Valley Shoreline Master Program.

To reintroduce vegetation in an effective manner Ecology would need to include a deeper amount of topsoil so that there is no concern of the root systems affecting the impermeable cap. See Diagram 1 for an approximate idea of topsoil needed for various vegetative covering and root depths. We request trees *not* be planted upon the land, as the deep root systems could cause concern with regard to the cap.

¹ A comprehensive list of vegetation native to Spokane County can be found at http://www.wnps.org/plant_lists/counties/spokane/spokane_county.html.

Diagram 1: Example of Root Systems for Various Prairie Plants (Conservation Research Institute, 1995).



Other Alternatives and Options

COMMENT 5

Another consideration, given the location and its proximity to both the Spokane River and to the Coyote Rock development, is to look at how Holcim, once rehabilitated, may serve the public in a positive manner. This may include the sale of the property to the City of Spokane Valley, and the use of the property by the City to create a playground or other attraction that enhances the value of the land beyond being behind a chain link fence. Such rehabilitation may require full excavation of the site versus a cap. We request that Ecology, Holcim, Inc., and the City of Spokane Valley communicate and consider other alternative options as means to reclaim a former industrial area back in a manner that is more in line with contemporary environmental values and land use.

Conclusion

We respectfully request that the above considerations are included in the Department of Ecology's decisions regarding the Holcim site. While we endorse option 1, we recognize that modified option 4 represents a significant improvement on the decisions that seemed imminent upon the completion of the RI/FS. Although we would vastly prefer that all CKD be removed permanently from the entire site, we

Jeremy Schmidt, P.E.
Cleanup Site Manager, Holcim Inc.
October 19, 2015
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agree that modified option 4 could be an adequate measure to safely contain the contaminants for at least the next 50 years.

Thank you,

UNIVERSITY LEGAL ASSISTANCE

Alexander Scott
Law Clerk

A handwritten signature in black ink, appearing to be 'RE' with a stylized flourish.

Richard Eichstaedt
Attorney

as/vy/RE

Responses to comments:

Response to Comment 1:

Ecology understands and respects that Spokane Riverkeeper, The Lands Council, and Spokane Falls Trout Unlimited all would prefer complete removal of contamination from the Holcim Inc. Site. While the Model Toxics Control Act does provide preference to the most permanent cleanup remedy (excavation and removal in this case), another provision of the law (i.e. disproportionate cost analysis) is utilized to determine whether or not the high cost of the most permanent cleanup remedy is justified when compared to the cost and benefit of the other Alternatives. In this case, complete removal failed to provide enough added benefit when considering the 5-fold increase in cost compared to the cost and benefit of the next best alternative.

Response to Comment 2:

The comment indicates that it would be preferential to install an impermeable layer in the form of a compacted clay liner to keep precipitation from coming in contact with the Cement Kiln Dust (CKD). Ecology has specified, in lieu of a compacted clay liner, that a geomembrane be installed over the waste that. A geomembrane liner should result in a lower permeability than a compacted clay liner and should keep precipitation from contacting the waste. Based on experience at other similar sites, Ecology prefers the use of a geomembrane for this site.

Response to Comment 3:

During the design phase of the final remedy, Ecology will require the PLPs to design and install stormwater best management practices (e.g. evaporation basins, swales, infiltration basins, etc.) to control all stormwater that could potentially runoff the engineered cap. The scope of work attached to the CD requires that the PLPs submit an Engineering Design Report (EDR) to Ecology for review and approval. The stormwater management design is a required part of the EDR. The PLPs will be required to manage all stormwater on-site and in concurrence with all applicable stormwater regulations.

Response to Comment 4:

Ecology concurs with the desire to ensure the cap is vegetated with appropriate native species. There are many species native to the region that will meet the listed goals (i.e. reduce soil moisture, increase evapotranspiration, reduce erosion, etc.) but don't require more than two feet of soil. Ecology would be concerned with adding an additional topsoil for two reasons: 1) additional topsoil would result in a taller landfill cover which would require steeper slopes, and 2) the added environmental impact of hauling more soil to the site is not necessary given there are native species that are compatible with the current conceptual design.

Response to Comment 5:

Please note that Ecology has communicated its *preference* that all contamination at the site, as recommended in your comment, be removed so the land can be used without any conditions or concerns related to contamination. However, as described in the response to comment 1, the Model Toxics Control Act does not allow for the selection of the remedy that is most protective of human health and the environment and that uses permanent solutions to the maximum extent practicable if:

There is another alternative that meets the minimum requirements for cleanup actions outlined in WAC 173-340-360 and if;

The incremental costs of the alternative over that of a lower cost alternative exceed the incremental degree of benefits achieved by the alternative over that of the other lower cost alternative.

Please also note that Ecology has no regulatory authority to require Holcim (US) Inc. or others to sell their property to a local government or to allow public access to private property.