



Responsiveness Summary

Draft Cleanup Action Plan

Heglar Kronquist Site

CSID 1135

FSID 645

Public Comment Period September 19 through October 18, 2012

Prepared by
Washington State Department of Ecology
Eastern Regional Office
Toxics Cleanup Program
Spokane, WA

October 2012

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**HEGLAR KRONQUIST SITE
DRAFT CLEANUP ACTION PLAN
RESPONSIVENESS SUMMARY**

The Washington Department of Ecology (Ecology) conducted a public comment period from September 19 through October 18, 2012 for the Draft Cleanup Action Plan (DCAP) prepared for the Heglar Kronquist Site. The DCAP is Ecology's document that explains the selected cleanup action for the Site based on the information presented in the Remedial Investigation (RI) and Feasibility Study (FS), and using the selection criteria required under the Model Toxics Control Act (MTCA). Ecology also held a public meeting to explain the remedy selection process on September 26, 2012.

The purpose of this Responsiveness Summary is to document Ecology's responses to the written comments sent to Ecology during the public comment period. Ecology would like to thank all who provided comments.

Ecology will not be making revisions to the Draft Cleanup Action Plan. We will issue this same document as the Final Cleanup Action Plan.

The Responsiveness Summary is organized as follows:

- I. Overview
- II. Index of comments received during the public comment period
- III. Comments received and responses

I. OVERVIEW

The cleanup of the Heglar Kronquist Site is being conducted under MTCA which is the regulation that governs the cleanup of sites in the state of Washington. MTCA was passed by Washington voters in November 1988. Kaiser Aluminum & Chemical Corporation, LLC (Kaiser), named the PLP (Potentially Liable Person) under MTCA, has accepted responsibility for the Heglar Kronquist Site. Kaiser is now known as DCO Management, LLC.

In March 2009, Kaiser signed an Agreed Order which required the completion of a Remedial Investigation (RI) and Feasibility Study (FS) for the Site. Public comment for the Agreed Order was conducted from February 9 through March 11, 2009 and a public meeting was conducted on February 17, 2009. Ecology issued a Responsiveness Summary on March 26, 2009 addressing the comments received during the public meeting and during the comment period.

The RI was conducted from 2009 through 2011. This RI consisted of field activities and data assessment in order to define the extent of contamination contributed by the landfill. It also included health and ecological assessments to determine current and potential exposure pathways at the Site. The Draft Final RI Report was made available for public review and comment from June 13 through August 5, 2011 and a public meeting was held on July 28, 2011. Ecology issued a Responsiveness Summary in August 2011 responding to written comments received during the comment period.

The FS was completed in November 2011. The public comment for the draft final FS Report was conducted from January 18 through March 19, 2012. This draft FS report evaluated possible cleanup remedies and determined there were two alternatives that are applicable to the Site. Alternative 1 which involves removal of the dross is a permanent remedy while Alternative 2 is a containment remedy. A Responsiveness Summary, addressing the comments received during this public review and comment period, was issued in April 2012. The FS report was finalized in May 2012.

Based on the information in the RI and the FS, Ecology issued the DCAP in August 2012. The public comment period for this DCAP was conducted from September 19 through October 18, 2012. The DCAP provides a detailed discussion of the alternatives considered and Ecology's selection process that identifies Alternative 2 as the chosen remedy for the Site. A public meeting was held on September 26, 2012 at the Mount Spokane High School; the selection process was also explained during this meeting. This Responsiveness Summary is to respond to written comments that were received during the public comment period.

During this comment period and during the public meeting, Ecology received a wide range of comments. During the public meeting, questions and comments were varied and included: consideration of groundwater treatment, disposal of dross in another location, financial assurance, groundwater monitoring, remedy selection, property values, and

signage. The arsenic in groundwater issue was also brought up despite the RI findings that this is not related to the dross in the landfill. Comments were made opposing the selection of Alternative 2; however, there were also comments in support of Alternative 2, particularly from residents living near or adjacent to the Site.

The selected alternative, **Alternative 2**, involves the **enhancement of the current landfill cap** with **additional ‘protection after cleanup’** requirements to ensure the continued protection of human health and the environment. These requirements are:

- **Compliance Monitoring.** This would include :
 - (a) Protection monitoring to confirm that human health and the environment are adequately protected during the cap enhancement;
 - (b) Performance monitoring to confirm that the cleanup action is performing as expected and that groundwater cleanup levels would be attained; and
 - (c) Confirmational monitoring to confirm the long-term effectiveness of the cleanup action, once cleanup levels are attained.
- **Institutional Controls.** These are critical measures that would be undertaken to limit or prohibit activities in order to assure the continued effectiveness of the cleanup action. These would include:
 - (a) Fencing around the landfill property;
 - (b) Restrictions to limit use of the property in the form of an Environmental Covenant that must be recorded as part of the property deed to restrict activities that would result in compromising the integrity of the cap and to warn future owners of the condition of the Site;
 - (c) Maintenance requirements for the cap including inspections and maintenance of the cap, and maintenance of the monitoring wells;
 - (d) Signage; and,
 - (e) Financial assurance. A bond, financial test, or other financial instrument to guarantee the cap is maintained as long as the dross remains on Site would be required.
- **Periodic Review.** Ecology would conduct a review of the Site at least every five years to ensure the continued protection of human health and the environment. Ecology would also publish a notice of any periodic review in the Site Register and provide an opportunity for public review and comment.

Ecology would like to reemphasize that the selection of the remedy was made based on the Model Toxics Control Act (MTCA) decision process. This requirement of the regulation ensures that there is a consistent process throughout our state that will choose a remedy that is protective of human health and the environment

Some of the important criteria that led to the selection of Alternative 2 are:

1. Short-terms risks are those that are associated with the alternative during construction and implementation, and the effectiveness of measures that will be taken to manage such risks. The risks associated with Alternative 2 are easier to mitigate than those of Alternative 1.
 - The risks for Alternative 1 include: ammonia and gross dust emissions during excavation and transportation of gross off-site; truck traffic transporting gross; noise; and additional leaching of gross constituents to groundwater during excavation. Additional measures would be needed to reduce the exposures to potential hazards and nuisances caused by these risks. These measures would be difficult to implement. In addition, these risks would be occurring throughout the duration of excavation and the transportation of gross which may take one to two years.
 - The risks for Alternative 2, would include the truck traffic to transport cap materials and backfill soils, noise, and non-gross dust emissions. These risks would be easier to control and would provide less exposure to potential hazards and emissions related to the gross. Fewer trucks would be needed and these would not be transporting gross. Construction of the cap is expected to last for less than a year (about two seasons).
2. Implementation of Alternative 1 is not easy because of the uncertainty of whether other landfills will accept gross and what additional pre-processing or treatment would be required. The capping in Alternative 2, when properly designed and maintained, is a proven reliable technology for landfills.
3. While Alternative 1 is permanent, Alternative 2 is permanent to the maximum extent practicable. Both alternatives are protective of human health and the environment and provide the same environmental benefits. Since Alternative 2 costs much less, MTCA requires that this alternative be selected.

I. INDEX OF COMMENTS RECEIVED

1. Letter from Dr. Dexter R. Amend received on September 25, 2012.
2. E-mail from Nora Searing and Cris Currie received on October 3, 2012.
3. E-mail from Maureen Ashley, Vickie Esarey, and Crystal Ashley received on October 13, 2012.
4. E-mail from John Roskelley received on October 18, 2012.

II. COMMENTS RECEIVED AND RESPONSES

1. Comments submitted by Dr. Dexter R. Amend in a letter received on September 25, 2012

Washington State Department of Ecology
4601 N. Monroe St.
Spokane WA 99205-1295

SEP 25 2012
DEPARTMENT OF ECOLOGY
EASTERN REGIONAL OFFICE

Dear dpt. Workers

How can you continue in disposal activity when you contradict you own criteria for continuence?

SEPA's determination of non-significance for the sight significantly being adverse to the environment or health .

1, Actions on the sight will not address contaminants in soil and groundwater. The contaminants come from rain, snow and patterns of weather which are out of the control of humans. Farm practices also, as a part of the local economy, cannot be changed even though they are known to contribute some soil variations which do not contribute significant acverse actions to the environment.

2. Any clean up will not change or benefit surface water or soil cocntaminants which have not been found anyway to adversely impact the environment.

3. People in the environment of the site and surroundings have not been able to impact animal and human pathways. EPA says, they were here before you.

4. Removal of adult trees from the adjacent area of the site will not be beneficial for the sight. The trees, as grass, are environmentally beneficial in that they provide oxygen to the air and take carbon dioxide from the environment for nutrition. To remove trees is a contradiction of what EPA is supposed to be about ecologically.

4. Page 3 states that Ecology has issued a determination of nonsignificance(DNS) for the cleanup action. To continue in cleanup activity is a contradiction of purposes.

Sincerely

Dexter R. Amend M.D.
E. 12624 Kronquist Rd.
Mead WA 99021



Responses:

Thank you for your comments. There seems to be confusion on the SEPA Determination of Non-Significance (DNS) issued for the cleanup action. This determination is issued for Alternative 2, the selected cleanup action, which involves cap enhancement along with other requirements. What the DNS means is that if Alternative 2 is implemented, the construction of the cap and other activities that would be associated with the remedy would not have an adverse effect on the environment. This DNS is not for the current site conditions.

Ecology's responses to the numbered comments are as follows:

1. Site investigations show that the dross in the landfill contributes to the chloride and nitrate in shallow groundwater. Infiltration of precipitation causes leaching of dross constituents to shallow groundwater resulting in chloride and nitrate concentrations to exceed state standards. Although nitrate is also coming from other sources due to the agricultural and cattle activities in the area, the dross also contributes to the nitrate in groundwater in the near vicinity of the landfill. The enhanced cap will prevent infiltration of precipitation through the dross and would stop the leaching of dross constituents to groundwater.
2. Stopping the leaching of dross constituents to shallow groundwater will improve the groundwater and surface water quality that are currently impacted with chloride and nitrate.
3. The dross definitely has impacted groundwater and surface water to the extent determined during the investigations. EPA investigated the Site earlier and turned it over to Ecology for additional evaluation.
4. The landfill cap is needed to prevent infiltration through the dross. We understand the importance of the trees; however, the removal of the trees is necessary so that the roots will not disturb and destroy the landfill cap. The large number of remaining trees in the area will continue to provide the ecological benefits you mentioned.
4. Again, the DNS is for the proposed cleanup action and not for the current site conditions. The MTCA regulation requires that actions be taken to address the contamination of the shallow groundwater.

2. Comments from Nora Searing and Cris Currie submitted via e-mail on October 3, 2012

Date: October 3, 2012

To: Ms. Teresita Bala
WA Department of Ecology
Toxics Cleanup Program
Tbal461@ecy.wa.gov

From: Nora Searing and Cris Currie

Re: Heglar Kronquist Site DCAP
Response to request for public comments

We are formally submitting our comments on the following three issues related to the DCAP:

- Ecology's selection of Alternative 2
- Impacts on property values
- Arsenic levels in neighborhood wells

Ecology's selection of Alternative 2

We support the selection of Alternative 2. It would be a nice idea, theoretically, to have the dross completely removed from the area (Alternative 1). But in reality, the complications associated with that action make it not only unrealistic but also ill advised from the standpoint of protecting the environment and the health and safety of the affected neighborhood. The potential pollution from exposing, digging up and transporting over 2,300 truckloads of toxic materials is alarming—and significantly more alarming than the alternative of keeping it contained and monitored. The trucks, the noise, the length of time needed to complete the job, the risk of toxic materials entering the air and groundwater, and the uncertainty/unpredictability about where the waste would even go (including possible delays and obstacles) all add up to a considerably greater level of risk than Alternative 2. Some folks at the public meeting seemed to feel that Ecology and Kaiser are both just trying to take the cheapest way out. We believe this is an unfair interpretation. The decision to select Alternative 2 is clearly based on choosing the safest way to handle the problem. It is just a fortuitous stroke of luck that it also happens to be more financially feasible.

We can also see that the “permanency” factor in the comparison between the two alternatives can easily evoke an emotional rush toward Alternative 1. The idea of just getting “completely rid” of the problem can be blindingly attractive. Our worry here is that someday in the future it might be shown to have been a shortsighted solution. What if, despite the best plans and intentions, not all of the dross was removed? What if the upheaval of the toxic materials caused further pollution down gradient from the site that was not discoverable until years later? One of most disconcerting things about Alternative 1 is that it would be considered “permanent”—a done deal with no continued monitoring, and all further recourse for responsiveness to future problems cut off. And Kaiser's liability will have permanently ended. We much prefer Alternative 2's built-in controls for continued monitoring and attention to the site well into the future.

Impacts on property values

Much of the collective frustration and anger in the neighborhood is understandably coming from residents' concerns about their financial investment in their homes and property. The studies have shown that the site's impact on air and drinking wells is insignificant. Nevertheless, the mere continued presence of the site, and the fears/concerns it raises, surely do have an impact on the perceptions of potential buyers. Even if everything seems safe now, potential buyers will not like the fact that they will always wonder if problems could arise again later. Even if there is no basis for that perception, it is still a factor that will very likely affect the attractiveness of the property and its perceived worth. We understand that protection of property values is clearly not part of Ecology's scope. Compensation for any damages to property values is an issue that concerned residents would best take up with Kaiser outside of the cleanup process—either through the courts, or if possible, through some kind of collaborative settlement process.

Also related to the property value issue is the concern of some residents about the institutional control of "signage" at the site in Alternative 2. We do support signage. All of the institutional controls that go with Alternative 2 are important for continued attention to the safety of the site. It seems that much of the local property owners' frustration arises from the fact that there was no such disclosure about the site when they purchased their property. It does no good to perpetuate this lack of transparency. The site and its problems are now common public knowledge. In all fairness, future buyers should have all the advance warning we wish we had had. We would suggest that warning signs definitely be placed, but that they be as discreet as reasonably possible. We hope there is some flexibility in the presentation and wording of such signage, so that an informative, accurate, even strident, message is clearly conveyed without unduly alarming people looking to buy property in the area.

Arsenic levels in neighborhood wells

It seems clear from the study data on wells in the area that high arsenic levels are not directly connected to the site. Forgive us, but it seems almost humorous that some folks seem to continuously direct anger about the arsenic toward Kaiser and Ecology, when it is only because of the site-related testing that we are now aware of having high arsenic. Please, folks, even if it is bad news, they did us a favor by bringing it to our attention. So now we can take action on our own to deal with the arsenic as we wish; and that should play out as a completely separate process with the Health Department, Whitworth Water, individual home owner solutions, or whatever—unrelated to the cleanup plan or any other demands for compensation for property value damages that might be addressed with Kaiser.

Thank you for the opportunity to submit formal comments.

Nora Searing and Cris Currie
11203 E. Heglar Rd.
Mead, WA 99021
509-466-9540

Responses:

Ecology's selection of Alternative 2

We appreciate your understanding of MTCA's remedy selection process for this Site. Ecology agrees with you that ideally Alternative 1 would provide the most permanent remedy for the Site. As we have discussed in the DCAP and in the public meeting, the risks associated with the excavation and disposal of the dross outweighs the permanency associated with this alternative. These risks are summarized in the Overview.

Alternative 1 is considered permanent if the dross is completely removed. If Alternative 1 were to be implemented, the removal plan would have to ensure that soil samples be collected to verify that all the dross had been removed. The difficulty with Alternative 1 is associated with the short-term risks and implementability.

Impacts on property values

For this Site, when shallow groundwater cleanup levels would be met, there would be no contaminated property beyond the landfill boundary. Property owners within the 1000-ft set back requirement for water well installation, however, would need a waiver to install a well. Property owners inside this area may want to consult with Kaiser when waivers will be needed. We concur that the consideration of impacts to property values from pollution are beyond the authority of MTCA. Ecology understands the concerns about potential adverse effects on property values that may result when a contaminated site exists near a community. Cleaning up this contaminated site should have an overall beneficial impact on the surrounding community, including rebounding property values. Ecology notes that residential developments have been growing in areas adjacent or near closed landfills that were capped and maintained, like around Mica Landfill and Greenacres Landfill. Both of these landfill sites have upscale housing developments near them.

Ecology recognizes the frustration of those residents who bought property in the area without knowing the existence of the landfill. Signage is one of the institutional controls requirements that will aid in providing such notice in the future. This would inform the public that **cleanup has been completed**; that potential risks to human health and the environment have been addressed; that institutional controls and other requirements are in place to ensure the integrity of the remedy. Ecology concurs that language should be selected that will provide appropriate notice without unduly alarming people. Ecology will carefully craft the language for the signage.

Arsenic levels in neighborhood wells

We appreciate and agree with your comments. We have explained this issue thoroughly with the community.

3. Comments from Maureen Ashley, Vickie Esarey, and Crystal Ashley submitted via e-mail on October 13, 2012

Bala, Teresita F. (ECY)

From: Maureen Ashley [maureenashleywa@yahoo.com]
Sent: Saturday, October 13, 2012 3:54 PM
To: Bergin, Carol (ECY); Bala, Teresita F. (ECY)
Cc: Vic and Jon Esarey; Crystal
Subject: Heglar Kronquist Comments due by October 18, 2012

Our recommendation continues to be Option #1. We have previously written our reasons, submitted at the last comments deadline. We have no intention of repeating ourselves again as we believe you and your agency have decided on Option #2 and will not honor the wishes of the majority of our neighbors for Option #1.

For certain, the Option #2 will STIGMATIZE the region where a toxic dump site will be literally "covered up" in stead of "completely removing" the toxic materials as in Option #1. Option #1 is the best remedy for removing contamination and allowing for proper RECOVERY of the land.

As for your plan to implement Option #2, ask yourselves, would YOU want to BUY,BUILD or LIVE in an area where a TOXIC DUMP SITE was "covered up" instead of "removed"????

This is another example of a big agency and a wealthy business getting together and kicking a group of neighbors to the curb. It's wrong.

Maureen Ashley, Vickie Esarey, Crystal Ashley

Responses:

Thank you for your comment and concerns. As we have emphasized earlier, Ecology is required to use MTCA's criteria when selecting cleanup actions. Ecology took steps to explain this process in the DCAP and in the public meeting. Ecology has worked with the local residents since prior to the beginning of formal stages of cleanup to understand community concerns. Ecology strongly disagrees that "this is an example of a big agency and wealthy business getting together and kicking a group of neighbors to the curb." The purpose of this MTCA regulation is to prevent something like this from happening. The regulation ensures the consistent application of the MTCA process components including remedy selection throughout the state.

Alternative 2, that provides enhance capping with other requirements, is protective of human health and the environment. This has also been explained in detailed in the DCAP. Although the dross remains contained on site, impacts of the dross to groundwater will be addressed; and together with the protection requirements, this remedy will continue to be protective.

Ecology has received varying public comments – from doing nothing, supporting capping, and supporting removal. We note that residents living adjacent to or near the Site, or along truck routes that would be used to transport the dross off-site, are generally supportive of Alternative 2 because of the risks (see the overview for a summary of these risks) associated with Alternative 1. Ecology’s selected remedy is the most practicable way to clean up this Site.

When the cleanup has been completed and the integrity of the remedy ensured, the community will be protected from potential impacts of this landfill. Again, Alternative 2 is as protective of human health and the environment as Alternative 1.

4. Comments from Mr. John Roskelley submitted via e-mail on October 18, 2012

Bala, Teresita F. (ECY)

From: John Roskelley [john@johnroskelley.com]
Sent: Thursday, October 18, 2012 2:18 PM
To: Bergin, Carol (ECY); Bala, Teresita F. (ECY)
Subject: Heglar Kronquist Site

Dear Ms. Teresita Bala:

I attended the meeting at Mt. Spokane High School and would like to comment on the DCAP.

I recommend Alternative 1 as the best action to take for a clean-up. It's permanent and removes any further potential for groundwater contamination. Anything less continues to allow the chemicals from the dross to enter into the groundwater.

Ecology, of course, is looking at the cost versus the exposure. Yes, Alternative 1 is far more expensive, but it will eliminate the problem. Whereas, Alternative 2 is cheaper in the beginning, but the site will have to be monitored forever and is meant to "reduce" possible exposure, not eliminate it.

I could not calculate and, evidently, neither could Ecology, how you arrived at \$20 million for Alternative 1. The variables were significant and the cost analysis was decided upon by using trucks. With a railroad within six miles of the site, huge amounts of the dross and soil could be moved significantly cheaper to a site further away. I don't think a realistic look at costs was done for a variety of transportation methods. The capping soil for Alternative 2 also involves a tremendous amount of trucking and air pollution, so given the alternatives, why not eliminate the problem, rather than monitor it forever?

When I asked about a third alternative – drilling wells and placing pumps that would send the groundwater to a lined pond with a wastewater treatment pond to remove the chemicals, it hadn't been studied. You need to remove the chemicals from the groundwater system and letting them dilute into the aquifer or Deadman Creek is unacceptable.

I'm also worried about property values. You made your decision to select Alternative 2 in a vacuum. All the pieces weren't considered. At the meeting, we were told that's not your responsibility. Well, whose responsibility is it to ensure the homeowner's property values are protected? If you're the agency in charge, homeowners shouldn't be required to find another agency to protect their home values.

Thank you for your time. Again, I strongly recommend Alternative 1 to eliminate the problem, not "reduce" it.

John Roskelley
10121 E Heron View Lane
Mead, WA 99021

Responses:

Alternative 1 is a permanent remedy but our evaluation based on the MTCA criteria shows that this is not the most practicable. Alternative 2 was chosen based on our evaluation of the different required criteria; as we have shown, this alternative is also protective of human health and the environment. Ecology disagrees with your statement that “Anything less continues to allow the chemicals from the dross to enter into the groundwater.” A cap that is designed and constructed properly will prevent dross contaminants from leaching to groundwater. Alternative 2 is equally as protective as Alternative 1.

It is also important to note that Alternative 2 will not expose the residents living adjacent to or very near the Site to ammonia and dross dust emissions, and cause more leaching to groundwater during removal. In addition, since both alternatives provide for the same protection of human health and the environment, we are required under the regulation to choose the lesser of the two in terms of cost.

The breakdown of costs for Alternatives 1 and 2 are provided in the Final FS Report. FS cost estimates generally provides an accuracy of +50 percent to -30 percent and is primarily used for relative comparative purposes between alternatives. Transportation costs were all based on using trucks for dross disposal off-site. Even with a railroad track within six miles from the Site, trucks would still be needed to transport the dross from the site to the railroad tracks. Additional unloading, loading, and handling of the dross from the trucks to the rail cars would have the potential to cause additional environmental impacts in this new area. Transport by trucks from the railroad to the receiving landfill may also be required, further creating potential for impacts and increased costs. Thus, trucking would represent the most practical way to transport the dross to an off-site landfill. Alternative 2 would only involve trucks to transport cap materials and fill materials. The dross would not be exposed and there would be no transport off-site.

As we also discussed during the public meeting, extracting groundwater from the impacted area would not be practicable due to the complex groundwater flow caused by the landslide block in the area. Ecology believes that when the chloride and nitrate from the dross is prevented from going to groundwater, the groundwater and surface water would meet state criteria in a reasonable restoration time frame of two to five years.

MTCA does not consider property values in the selection of remedy. MTCA’s main objective is to select site remedies that are protective of human health and the environment. Residents may want to consult with local government officials about the possibility of property tax abatements or adjustments based on impacts on property values from pollution concerns; however, this is beyond the authority of the MTCA process. The Spokane County Assessor’s Office has dealt with similar inquiries and valuation related issues for other properties located near cleanup sites.

We acknowledge your recommendation and thank you for your comments. However, the selection of Alternative 2 is consistent with the decision process under MTCA.