RESPONSES TO COMMENTS

Superlon Plastics Co., Inc.

September 14 to October 16, 2017 Public Comment Period

Partial Remedial Investigation report, partial Feasibility Study report, Interim Action Work Plan, and State Environmental Protection Act determination

Prepared by

Washington State Department of Ecology

Southwest Regional Office

Toxics Cleanup Program

300 Desmond Drive

Olympia, Washington 98504-7775

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Contents

Acronyms and Abbreviations

CAP	Cleanup action plan
COCs	Chemicals of concern
Ecology	Washington State Department of Ecology
EPA	United States Environmental Protection Agency
IA	Interim Action
LNG	Liquified Natural Gas
MTCA	Model Toxics Control Act
PAHs	Polycyclic aromatic hydrocarbons
PCBs	Polychlorinated biphenyls
PSE	Puget Sound Energy
PLPs	Potentially liable persons or parties
RI/FS	Remedial investigation and feasibility study
SAP	Sampling and Analysis Plan
WAC	Washington Administrative Code

Introduction

The Department of Ecology (Ecology) held a public comment period September 14 through October 16, 2017, on several cleanup documents for the Superlon Plastics site. The potentially liable parties (PLPs) who are legally committed to this cleanup work are the White Birch Group, LLC, E.I. du Pont de Nemours and Company, Superlon Plastics, and The Chemours Company.

These cleanup documents refer to a portion of the Superlon Plastics cleanup site, the White Birch property. To reduce confusion, we will refer to the smaller area as the *interim action area*. The word *site* will refer to either generalized cleanup projects or the entire Superlon Plastics site, which has not yet been fully determined.

The interim action area is generally located at 2116 Taylor Way, Tacoma, WA.

The following documents were available for public review and comment:

Partial remedial investigation – describes the types and extent of contamination on the White Birch property portion of the site.

Partial feasibility study – evaluates cleanup alternatives for the White Birch portion of the site.

Interim action work plan – describes cleanup plans for the White Birch portion of the site.

State Environmental Protection Act (SEPA) determination – declares that mitigation can address any potential negative impacts caused by cleanup activities.

Public comments and Ecology's responses are summarized in this document.

Contacts

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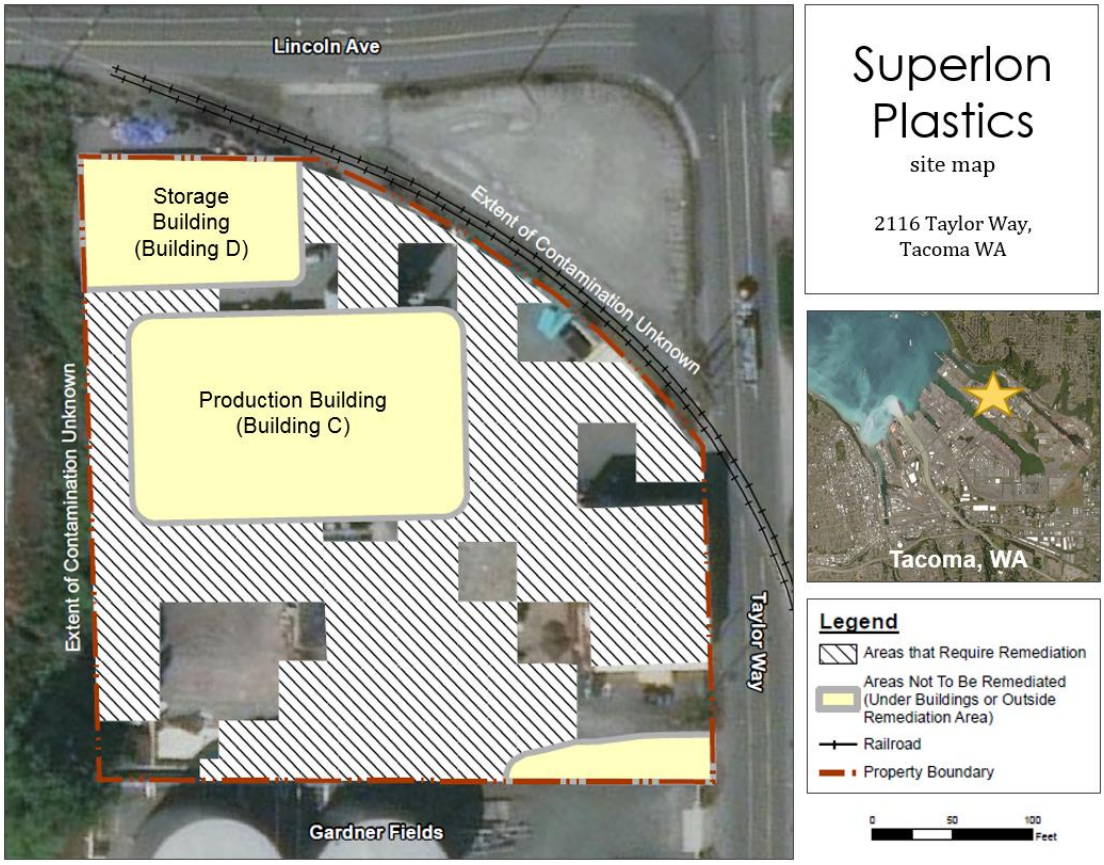
Site Location

The Superlon Plastics site is located at 2116 Taylor Way in Tacoma, Washington (Figure 1, below).



Summary of Public Involvement

Washington's cleanup law, the Model Toxics Control Act[1] (MTCA) mandates public involvement in the site cleanup process. Specifically, Ecology must inform stakeholders and nearby residents of milestone developments in cleanup by:

- Posting in Ecology's Site Register.
- Mailing notification to nearby residents.
- Placing an ad in a local, widely circulated newspaper.
- Notifying stakeholders, public officials, and others who have expressed interest.

To better inform those interested, in addition to legal requirements, we also:

- Posted announcements in Ecology's Public Involvement Calendar.
- Posted updated information on Ecology's Superlon Plastics website.
- Held a public meeting.

A public meeting to describe and discuss the cleanup work at Superlon Plastics was held at The Norpoint Community Center on October 4th, 2017.

The public comment period ran September 14—October 16, 2017.

Fact Sheets and Other Outreach

Ecology provides public notice at the beginning of 30 day comment periods for all MTCA-based cleanup sites. We provided notice through the following avenues to advertise and describe the Superlon Plastics comment period:

- Fact sheet mailer – Sent to about 440 neighboring residents and stakeholders.
- Email announcement – Sent to about 125 interested residents and stakeholders including:
    - Neighborhood Council chairs
    - Tribal representatives
    - Contacts with non-profit organizations and community groups such as Citizens for a Healthy Bay and Redline Tacoma
    - city, county, state, and federal agency officials
    - individuals who have requested to be on the mailing list for this specific site
- Website – https://fortress.wa.gov/ecy/gsp/Sitepage.aspx?csid=2096.
- Notice on Ecology's Public Involvement Calendar.

[1] Model Toxics Control Act (WAC 173-340), Revised 2013

- Notice on Ecology's Site Register, an update of cleanup activities conducted with Ecology's oversight that is published every two weeks.
- Legal ad placed in the Tacoma News Tribune.

Summary of Comments

We received three comment letters for the partial Remedial Investigation, partial Feasibility Study, Interim Action Work Plan, and SEPA determination for the Superlon Plastics site. The comments did not lead Ecology to make substantive changes.

The cleanup documents are available in hard copy in the site file and online at https://fortress.wa.gov/ecy/gsp/CleanupSiteDocuments.aspx?csid=2096.

List of Commenters

Name	Affiliation	Date
Scott Hooton	Port of Tacoma	9/28/17
Twylia Westling	Individual	10/16/17
Melissa Malott	Citizens for a Healthy Bay	10/13/17

Responses to Individual Comments

Port of Tacoma, Scott Hooton

Submitted via email, 9/28/17

Comment 1

Agreed Order No. DE 5940 requires White Birch Group, LLC, E.I. du Pont de Nemours and Company and The Chemours Company FC, LLC to conduct a Remedial Investigation, Interim Actions, and a Feasibility Study and to prepare a draft Cleanup Action Plan. The Port requests an update to Exhibit E (Scope of Work/Schedule of Deliverables) for the completion of the required work.

Response 1

Ecology will prepare an update with the assistance of the environmental consultants and provide it to the Port of Tacoma as soon as possible.

Comment 2

The Port of Tacoma (Port) owns adjacent properties located at 3401 Lincoln Avenue, and a smaller triangle shaped parcel at the intersection of Taylor Way and Lincoln Avenue. Samples obtained from Port-owned property indicate the presence of arsenic and other hazardous substances associated with Superlon in groundwater and sediments on Port property. Establishing the extent of contamination – including contamination extending onto Port-owned property – is prerequisite to completing the deliverables required under the Ecology Agreed Order. The Port requests that the parties expedite work required under the agreed order so that any impacts to Port-owned property can be mitigated expeditiously.

Response 2

The project plan is to further characterize the site, as a whole, which includes the aforementioned properties. This will be done as soon as possible, following commencement of the interim actions that are the subject of this comment period.

Twylia Westling

Submitted via email, 10/16/17

Mon 10/16/2017 1:46 PM

Twylia Westling [redacted]

Superlon Site Cleanup comments Site # 2776343

To Coleman, Marv (ECY); MacClellan, Megan (ECY)

You replied to this message on 10/16/2017 2:25 PM.

Dear Mr. Coleman and Ms. Macclellan

Please find below my comments with regard to the Superlon site slated for cleanup.

My first and most important comment is with regards to the decision to use an environmental covenant on the site, followed closely by the desire that Ecology ensure that industry be held financially responsible to the highest possible cleanup. If my notes are correct, I believe I heard you say that the slag from the Occidental Chemical cleanup had been removed from the Superlon site. With that as a starting point:

1. An environmental covenant essentially says that the site is so contaminated it can never be used for anything other than industrial purposes. We must learn from history and remind ourselves that since only industry has ever been on the port, every ounce of toxic contamination is BECAUSE of industry. Industry continues to behave irresponsibly with regard to the land and the water. This would basically allow industry to have title to the land forever. Industry banks on and budgets for as minimal a fine and cleanup cost that they can get away with. They are not actively trying to manage and mitigate their environmental harm to the land. As far as I know, there is no real time measurement or monitoring process in place that would discover the degradation of land and water. That usually happens long after industry is gone.
2. If this it is true that the Occidental Chemical slag is gone, then there is no reason to put an environmental covenant on this property. If the next three years are spent remediating the remaining arsenic and lead, to get as close to zero as possible, there is no need to put an environmental covenant on the property
3. I am imploring Ecology to hold industry financially accountable to highest level permissible as a way to ensure that industry cannot continue to bank on/budget for minimal costs for future cleanups. This does not deter their continued irresponsible behavior.
4. I would also implore Ecology to begin advocating for more meaningful ways of monitoring the activities of industry so as to be able to address environmental contamination early rather than late.

Thank you for taking the time to explain this to the community. We will be working to get a rule change with regard to how constituents are notified for future cleanups. I do not live within a half mile of this site, but I am very concerned about the Salish Sea and the waterways of the Port. I spend a good deal of time down there as Anishiinabekwe reconnecting to the land and the water. I know many more people who are just as concerned even though they don't live that close to these sites.

Take great care.

--
Twylia Westling, MPA
The 'i' is silent; I'm not.

Comment 1

An environmental covenant essentially says that the site is so contaminated it can never be used for anything other than industrial purposes. We must learn from history and remind ourselves that since only industry has ever been on the port, every ounce of toxic contamination is BECAUSE of industry. Industry continues to behave irresponsibly with regard to the land and the water. This would basically allow industry to have title to the land forever. Industry banks on and budgets for as minimal a fine and cleanup cost that they can get away with. They are not actively trying to manage and mitigate their environmental harm to the land. As far as I know, there is no real time measurement or monitoring process in place that would discover the degradation of land and water. That usually happens long after industry is gone.

Response 1

With regard to environmental covenants (ECs), in general, it depends a lot on the specifics of a given EC. Ecology places ECs on a variety of types of property, including residential. The nature of an environmental covenant depends on the conditions that remain once active cleanup work is finished long term treatment and/or monitoring, and the expected future use of the property.

For example, it's common for cleanup actions to include removing all soils with contaminants above Model Toxics Control Act (MTCA) cleanup standards, but to leave behind groundwater that is still above the MTCA standards. This often occurs because groundwater cleanup is very challenging and can take years or even decades in best case scenarios using the best available techniques, if any exist. In such a case, since human contact with contaminated soil has been precluded, allowing the property to be used for residential applications, the covenant will prohibit withdrawal of groundwater for consumption. This is not the case for the Superlon Property where residential use will not be allowed in any case, in part, because it is zoned industrial and is surrounded by other contaminated properties. Cleaning up to MTCA industrial standards is logical when it is expected that the area in question will remain industrial.[2]

On all cleanup sites, before active cleanup work is assumed to be finished, confirmation sampling is done to confirm if contamination remains. If any remains above the applicable cleanup standards, on-going monitoring of the affected media will be required by the EC. This will be required to be done for as long as contamination exists above cleanup standards. Because the EC is attached to the property title, subsequent property owners or users will be made aware of the EC provisions. To be sure that these provisions are being met, the site will be subject to reviews every five years for as long as the EC remains in effect.

[2] Please see the attached copy of the Environmental Covenant for the Kaiser Aluminum cleanup Site.

Comment 2

If this it is true that the Occidental Chemical slag is gone, then there is no reason to put an environmental covenant on this property. If the next three years are spent remediating the remaining arsenic and lead, to get as close to zero as possible, there is no need to put an environmental covenant on the property.

Reponse 2

In the case of Superlon, there are multiple contaminants from multiple sources, other than just the Occidental lime sludge (not slag). Each of these contaminants has its specific cleanup standards, based on expected future land use. In this particular case, some of the contaminants are so high that there is no technology that exists that can completely eliminate it from all soils and groundwater at the site.

Please note that although we attempt to get the contamination at a site cleaned up as thoroughly as possible, the standards that are established are not based on zero residual being left behind. The cleanup standards that we use under MTCA are based on calculations that take into account the toxicity of substances, expected frequency of contact, expected length of time of contact, future use of the property, and other factors. When we say a site is "clean", that does not mean that there is zero residual contamination. In terms of environmental cleanup, zero doesn't really exist. We are limited by our ability to detect contaminants.[3] Under MTCA, clean means that the site meets the standards set in the science-based rulemaking process.

Comment 3

I am imploring Ecology to hold industry financially accountable to highest level permissible as a way to ensure that industry cannot continue to bank on/budget for minimal costs for future cleanups. This does not deter their continued irresponsible behavior.

Response 3

Potentially Liable Parties (PLPs) that perform environmental cleanups under MTCA are required to perform the remediation in accordance with the performance standards inculcated in the MTCA Regulations and Statute. They are responsible for paying for all the costs of whatever remedies are approved by Ecology for the situation in question. For example, they are not eligible for grants and

[3] "Clean" in Ecology's MTCA and EPA's Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) terms means it meets the standards set by the State or Federal governments, appropriate for the expected future use of the site.

loans, like local governments can be. Additionally, if there is more than one PLP, all of them are jointly, severally, and equally liable for all the costs of the remediation.[4]

MTCA regulations do not provide for punitive damages to be assessed in most cases – although separate third party lawsuits are sometimes brought by outside parties. One point to keep in mind is that in many (if not most) cases, the parties that originally created the environmental degradation no longer exist. In these cases potential liability is typically assigned to the current owner, who is then held responsible for the cost of cleanup by law. For more detail, see RCW 70.105D.040, which also provides for penalties if a PLP does not perform.

Comment 4

I would also implore Ecology to begin advocating for more meaningful ways of monitoring the activities of industry so as to be able to address environmental contamination early rather than late.

Response 4

The toxic legacies of the past generally won't be repeated by industry because we now have laws that prohibit the kind of activities that produced those problems. Typically, when these problems were created, there were no laws and no regulatory agencies to enforce sustainable practices.In practice, Ecology's Toxic Cleanup Program oversees and performs cleanups of historical problems in accordance with MTCA. Three different branches of Ecology are the primary regulators for existing industrial operations: Ecology's Hazardous Waste and Toxics Reduction Program, and Water Quality Program, in accordance with their respective regulations and statutes, as well as municipal and county regulatory agencies and EPA.

As a result of our modern regulatory structure, currently operating industrial facilities don't pollute like historical industrial facilities did. Modern facilities have to follow environmental regulations and are regularly inspected. Before they can begin operations, or if their operations change, they have to provide health and safety plans, waste water management plans, and waste materials management plans. All of these plans have to be approved by regulatory agencies, at local, county, state and federal levels. In the case of the Port of Tacoma, the Port also requires similar waste management scrutiny in their leases to port tenants.

You may want to inquire with these other programs, as well as City, County, and Federal agencies, what their various permitting, inspection, monitoring, and certification programs do to stay on top of commercial and industrial activities.

You may also be interested in investigating the role of stormwater in Commencement Bay. In the past, we understood industrial activities as the primary source of pollution. Today, we know

[4] Under the Model Toxics Control Act, if more than one party has been formally identified as potentially liable for cleanup work, each individual party is responsible for the entire amount of cleanup. All parties are also collectively responsible for this cost. If more than one of them is capable of paying cleanup costs, then those parties share the total cost. However, if only one party can pay for cleanup, that party is responsible for the entire cost, not just their share.

stormwater also plays a major role in polluting the Puget Sound and Commencement Bay by conducting household detergents, fertilizers, oil and other materials from roadways, etc.

Citizens for a Healthy Bay, Melissa Malott

Citizens for a Healthy Bay

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October 13, 2017

Marv Coleman, Cleanup Project Manager
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Marv.Coleman@ecy.wa.gov

Re: Superlon Plastics Cleanup Site, Cleanup Site ID #: 2096

Dear Mr. Coleman:

Thank you for providing the opportunity to review and comment on the cleanup documents for the Superlon Plastics Cleanup Site at 2116 Taylor Way in Tacoma.

Citizens for a Healthy Bay (CHB) is a 27-year-old environmental organization whose mission is to represent and engage citizens in the cleanup, restoration and protection of Commencement Bay, the surrounding waters and natural habitat. We are a 501(c)3 nonprofit providing practical, solutions-based environmental leadership in the Puget Sound area. We work side-by-side with local citizens, businesses and governments to prevent water pollution and make our community more sustainable.

Staff and expert members of CHB's Policy and Technical Advisory Committee have reviewed the cleanup documents, including the Partial Remedial Investigation (RI), the Partial Feasibility Study (FS), the Interim Action Work Plan and the State Environmental Protection Act (SEPA) Determination. We have also met with with representatives from the Washington State Department of Ecology (Ecology) and attended Ecology's open house on the site. Our comments are outlined below.

Background

The Superlon Plastics site ("Superlon" or "the site") has contaminated soil, groundwater and surface water from historic industrial activities, including pesticide manufacturing, wood treatment, chemical and fuel storage, and historic land-filling activities. This cleanup only focuses on a portion of the site that is owned by White Birch Group, LLC (White Birch) and seeks to address the worst contamination quickly. The entire site will be defined and addressed in the future.

General Comments

Comment 1

Overall, we are disappointed with the cleanup levels proposed for the Superlon site and we find them to be wholly inadequate. Further, this is an interim cleanup and, therefore, no work performed should preclude or complicate a final cleanup that is more protective and has lower levels of chemicals of concern on-site.

Comment 2

All materials that are hazardous should be sent to a hazardous waste disposal facility rather than chemically treated to reduce toxicity. CHB is significantly concerned about treated wastes going to a non-hazardous waste landfill, particularly because there is evidence that the proposed landfill is leaking metal containing leachate into the headwaters of Muck Creek and South Creek.

Comment 3

This partial cleanup proposes using chemical treatment to lower the toxicity of the waste. As mentioned above, CHB does not support this strategy. While bench tests and pilot tests have been completed, those tests may not reflect the success of the chemical

Comment 4

treatment on all the waste that is proposed for treatment. This means that there should be regular samples pulled and sent to TCLP for analysis. Those results should be returned and evaluated by Ecology before any material leaves the site.

Our specific comments on the partial RI, partial FS and remedy design are outlined below.

Specific Comments

1. *Partial Remedial Investigation*

Comment 5

It is unclear why no borings were made under building C, since all other buildings have borings beneath them. Unless adequate explanation can be given for this gap, the partial RI should be supplemented with data from borings beneath building C.

Comment 6

2. *Partial Feasibility Study*

As mentioned in our general comments, the cleanup standards are unacceptable.[1] Too few samples were analyzed to adequately determine cleanup levels for soil and water cleanup numbers. The levels Ecology has determined are excessively high, particularly for OU 5. Standard defaults should be used across the site for industrial exposure.[2]

Comment 7

In Table 8-2, the table that ranks the alternatives, numeric rankings are skewed to make the most protective alternative have lower rankings – this must be fixed to represent a fair ranking system. Community exposure and worker exposure should be rated 2.

[1] See Table 5-7.
[2] See Table 5-8.

Granted, there is more material to excavate under a more thorough cleanup alternative, which would give it a lower "rating," however giving it a poor rating would mean no controls. Rather, time to achieve RAOs should be rated 3. Further, all alternatives have a relatively short timeframe since these are less than 5-10 year scenarios rather than lifetime cleanups. Lastly, for both public concerns and sustainability, it is not clear why alternative 5 is rated poor. This should be clarified and/or rated higher. In terms of cost, alternative 5 is three times the lowest alternative and should, therefore, be rated 3.

3. *Remedy Design*

Since the cleanup numbers are not acceptable, the design must be redone using a more conservative soil cleanup number. CHB's concerns and recommendations regarding the remedy design are listed below:

Comment 8
- Regarding the gravel or asphalt cap, if gravel is used, a marker layer is needed – a gravel cap is only acceptable without a marker if the soil is treated.

Comment 9
- Since the OU 5 Shot Area is excluded from this cleanup, intended to be covered in a future remediation, Ecology must ensure that this takes place in a timely manner.

Comment 10
- Section 2.3: The soil RELS were derived using too few samples. The default industrial should be used, which would allow 50,000ppm of lead to remain.

Comment 11
- Regarding water, it is not clear if Ecology has made an official determination that the water is non-potable. This should be clarified.

Comment 12
- Section 3.6: The asphalt pad must be certified as being in good shape and impermeable. It is not acceptable to infiltrate the pad runoff given concentrations of contaminants in the soil.

Comment 13
- Section 4.1: The RAU should be delineated through sampling before or after excavation.

Comment 14
- Section 4.5: Dust control must be specified.

Comment 15
- Section 4.5.3: Regarding hazardous debris sampling, the samples should be a composite rather than a grab. Given that the debris will need to be crushed prior to lab analysis, it is inappropriate to assume that the debris is adequately screened to determine that it will be hazardous.

Comment 16
- Section 4.7.2: The areas requiring and the areas not require side sampling must be mapped out in advance. Further, Ecology must agree on the areas where side samples are or are not required. The document as written is not clear on this point.

Comment 17
- Section 4.9: Sampling of perched water is required to ensure that additives work. As written, it is not clear what the proposal is if this does not work.

Comment 18
- All wood containing debris must be taken to a hazardous waste landfill.

Comment 19
- Wash water used to decontaminate trucks and wheels should be contained and tested for chemicals of concern.

Comment 20
- Arsenic and lead-containing soil should not be used as backfill.

Comment 21

Comment 22

- There is no apparent monitoring plan for either soil or groundwater monitoring. Such a plan should be put in place and the data available for public review. Monitoring wells should be reinstalled.
- The REL's are too high and should not be the final REL's for the site.

Please contact me if there are questions regarding our comments. Thank you for the opportunity to provide feedback on the partial cleanup plans and reports for the Superlon Plastics cleanup site.

Sincerely,

Melissa Malott
Executive Director, Citizens for a Healthy Bay

Ecology Response:

Comment 1

Overall, we are disappointed with the cleanup levels proposed for the Superlon site and we find them to be wholly inadequate. Further, this is an interim cleanup and, therefore, no work performed should preclude or complicate a final cleanup that is more protective and has lower levels of chemicals of concern on-site.

Response 1

The cleanup levels for this interim action (referred to in the report as remedial evaluation limits, or RELs) are risk-based concentrations that take into account future land use and soil and constituent characteristics. In establishing these RELs, we have followed procedures presented in the Model Toxics Control Act. Because Ecology staff have reviewed the RELs and find them acceptable under the Model Toxics Control Act (MTCA), we will maintain them in the interim action.

As with any interim phase, if new information indicates that different RELs or remedies are necessary, the work can be amended to reflect the new necessities.

Comment 2

All materials that are hazardous should be sent to a hazardous waste disposal facility rather than chemically treated to reduce toxicity. CHB is significantly concerned about treated wastes going to a non-hazardous waste landfill, particularly because there is evidence that the proposed landfill is leaking metal containing leachate into the headwaters of Muck Creek and South Creek.

Response 2

Thank you for bringing this to our attention, as TCP and the Superlon PLPs were not aware of the situation and this served for us both to investigate and get to the bottom of the questions. Ecology and the PLP are similarly concerned and, based on this comment, checked with the Tacoma Pierce County Health Department (TPCHD) to determine what the leachate situation is at LRI.

The concern was found to consist of:

1. Malfunctioning equipment that allowed condensate to mix with stormwater that was to go to a treatment system. This was addressed by the facility and approved by TPCHD.
2. Leachate that seeped into a stormwater ditch and was subsequently recovered and trucked to the Chambers Creek treatment facility. Both incidences were considered single occurrences, not chronic leakage from the waste mass.

In general, if the landfill will take it and the Tacoma Pierce County Health Department has issued a waste disposal authorization (WDA) based on test results, that is where Ecology will allow it to go. Since the authorization has been issued, we will follow through with our plan.

Additionally, as a company policy, DuPont does extensive audits of disposal facilities before they will authorize anything to go there. They did that at the inception of this project – with both Waste Management, Inc. (WMI) and Land Recovery Inc. (LRI) landfills.

Comment 3

This partial cleanup proposes using chemical treatment to lower the toxicity of the waste. As mentioned above, CHB does not support this strategy. While bench tests and pilot tests have been completed, those tests may not reflect the success of the chemical treatment on all the waste that is proposed for treatment.

Response 3

The bench and pilot tests were designed to apply to all of the waste that is proposed for treatment. The results of the bench and pilot testing indicated that the treatment process surpassed expectations in meeting the needs of the MTCA-based cleanup plans. We amended the partial feasibility study for Superlon to reflect these results. The goal of treating the waste to lower its toxicity is for disposal purposes only (i.e., to lower disposal costs) and not the whole remedy, per se. Only soils that are designated to be disposed of off-property will be treated.

Comment 4

Partial Remedial Investigation

It is unclear why no borings were made under building C, since all other buildings have borings beneath them. Unless adequate explanation can be given for this gap, the partial RI should be supplemented with data from borings beneath building C.

Response 4

Near-surface hand auger sampling was performed under buildings A and B, areas which were accessible, before they were demolished, to get an initial idea of the relative concentrations of contamination present. Building C is slab on grade and has no accessibility below it. Samples were taken to depth by mechanized borings after buildings A and B had been demolished, for the detailed characterization laterally and vertically.

Comment 5

Partial Feasibility Study

As mentioned in our general comments, the cleanup standards are unacceptable.[5] Too few samples were analyzed to adequately determine cleanup levels for soil and water cleanup numbers. The levels Ecology has determined are excessively high, particularly for OU 5. Standard defaults should be used across the site for industrial exposure.[6]

Response 5

Over 1,300 analyses have been performed to date, throughout the entire property, except under Building C. Building C is the manufacturing building for an active pipe manufacturing facility. MTCA generally allows for non-leachable contamination to be left in place until a structure is demolished or revised. Accordingly, soils underlying Building C will be characterized when it is demolished or revised.

Samples from the monitoring well down gradient from Building C show contaminant (lead and arsenic) concentrations similar to the up-gradient reference well throughout the eight years of sampling. Results from this well indicate the non-leachable nature of any contamination, if it exists, under the building, i.e. the area under the building does not characterize as a source of contamination to groundwater, based on this monitoring. An Environmental Covenant will also be placed on the property in the future to ensure compliance. The building would currently serve as an acceptable cap, if contamination were found to exist in its footprint.

As described in section 2.2 of the remedial design report, OU5 is excluded from this site and this remediation. OU 5 contains materials from other parties, from the USG Taylor Way Plant Site, which is currently undergoing cleanup. This operating unit will be addressed through a third site investigation for which the MTCA process has begun. The pertinent PLPs for that action have already been notified.

Comment 6

[Partial Feasibility Study]
In Table 8-2, the table that ranks the alternatives, numeric rankings are skewed to make the most protective alternative have lower rankings – this must be fixed to represent a fair ranking system. Community exposure and worker exposure should be rated 2. Granted, there is more material to excavate under a more thorough cleanup alternative, which would give it a lower "rating," however giving it a poor rating would mean no controls. Rather, time to achieve RAOs should be rated 3. Further, all alternatives have a relatively short timeframe since these are less than 5-10 year scenarios rather than lifetime cleanups. Lastly, for both public concerns and sustainability, it is not clear why alternative 5 is rated poor. This should be clarified and/or rated higher. In terms of cost, alternative 5 is three times the lowest alternative and should, therefore, be rated.

[5] See Table 5-7.

[6] See Table 5-8.

Response 6

It should be noted that changing the rating to the suggested values would not change the outcome of the analysis. The rating system was developed to follow MTCA guidance by creating a comparative ranking of alternatives.

If you have further questions, or would like more in-depth information about how disproportionate cost analyses are conducted, please contact Marv Coleman at (360) 407-6259.

Comment 7

Remedy Design

Since the cleanup numbers are not acceptable, the design must be redone using a more conservative soil cleanup number. CHB's concerns and recommendations regarding the remedy design are listed below:

- Regarding the gravel or asphalt cap, if gravel is used, a marker layer is needed – a gravel cap is only acceptable without a marker if the soil is treated.

Response 7

Section 4.14.4 of the Remedial Design report states that "…a geotextile liner or woven fiber fabric at all of the disturbed, unpaved areas." This will act as a marker demarking the backfill/overburden that is reused on the property. The clean imported gravel backfill is very distinct when compared to the native materials (soil and fill). The backfill itself will be a visual identification layer as the underlying soils (the bottom of the excavation) are predominately clay-rich silt or (when not clay-rich silt) a coarse gravel/fill mixture.

Comment 8

[Remedy Design]

- Since the OU 5 Shot Area is excluded from this cleanup, intended to be covered in a future remediation, Ecology must ensure that this takes place in a timely manner.

Response 8

PLPs for that future action have already been notified, as noted above. The Office of the Attorney General is currently reviewing some claims made by one of the respondents regarding the claims' legal validity as a result of their bankruptcy action.

Comment 9

[Remedy Design]

- Section 2.3: The soil RELS were derived using too few samples. The default industrial should be used, which would allow 50,000ppm of lead to remain.

Response 9

Over 1,300 samples were collected during the RI and were considered during the development of the RELs.

RELs are risk-based concentrations that take into account future land use and soil and constituent characteristics (and do not reflect the number of samples collected). This calculation does not use site data to determine the appropriate REL.

The default industrial cleanup level is 1,000 ppm, not 50,000.

Comment 10

[Remedy Design]

- Regarding water, it is not clear if Ecology has made an official determination that the water is non-potable. This should be clarified.

Response 10

Ecology has approved groundwater monitoring reports and the RI (section 8.3) where it was established that perched water and groundwater is non-potable due to the levels of total dissolved solids (salt). For example, this determination was made for an adjacent up-gradient site (Reichhold Chemical) and, thus, is applicable to the Superlon Property. This designation is used for near-surface groundwater throughout the Tideflats, thus is not necessarily repeated in every remedial investigation performed in the Tideflats area.

A precedent, established by Ecology staff member Charles San Juan, LHG, serves in groundwater potability decisions like this one. Following the "Harbor Island Exclusion," we can classify groundwater as non-potable if it can be shown that:

1. Groundwater enters surface water
2. Surface water (such as marine water) is not classified as potable
3. Groundwater is hydraulically connected to surface water such that it is not feasible to use groundwater for drinking (e.g., a drinking water well would pull from surface water).

See also: attached policy draft regarding groundwater potability for a Tideflats Site.

Comment 11

[Remedy Design]

- Section 3.6: The asphalt pad must be certified as being in good shape and impermeable. It is not acceptable to infiltrate the pad runoff given concentrations of contaminants in the soil.

Response 11

Infiltration of stormwater has been approved as a condition of the Construction Stormwater General Permit (CSWGP), a required permit for the project. In a more general sense, any pavement designated as a cap undergoes this kind of scrutiny as part of the Remedial Action. It will be continually monitored as a requirement of the Environmental Covenant and each time a Five Year Review is performed.

Comment 12

[Remedy Design]

- Section 4.1: The RAU should be delineated through sampling before or after excavation.

Response 12

The RAU's size and shape has been determined using collected data. As stated in Section 4.7 of the RD report, the sidewalls and bottoms of the excavations will be sampled to confirm accurate definition of the unit, as is always required by any Remedial Action overseen by Ecology.

Comment 13

[Remedy Design]

- Section 4.5: Dust control must be specified.

Response 13

Dust control measures are identified in the Stormwater Pollution Prevention Plan (SWPPP) that was submitted to Ecology and approved by the Construction Stormwater General Permit (CSWGP). Please note the attached photograph of air monitoring equipment being used at the Site even before the Interim Action ramps up.

Comment 14

[Remedy Design]

- Section 4.5.3: Regarding hazardous debris sampling, the samples should be a composite rather than a grab. Given that the debris will need to be crushed prior to

lab analysis, it is inappropriate to assume that the debris is adequately screened to determine that it will be hazardous.

Response 14

Comment noted -- There was no mention of the sampling method (composite vs grab) in the Remedial Design Report. Please note the attached photo of the materials management cells located in the job office sat the site, which includes a cell for holding hazardous debris that has been characterized and sorted out. Debris will have to be representatively sampled & characterized before it is accepted for disposal, wherever that is to occur.

Comment 15

[Remedy Design]

- Section 4.7.2: The areas requiring and the areas not require side sampling must be mapped out in advance. Further, Ecology must agree on the areas where side samples are or are not required. The document as written is not clear on this point.

Response 15

The Remedial Design Report, which has been approved by Ecology, describes where sidewall sampling is and is not required.

Section 4.7.2 states "Excavation sidewall sampling will only be conducted in RAUs that occur along the Property boundary or adjacent to an area of the Property that does not require remediation."

Figure 2-2 identifies the areas where no remediation is needed (in pink). Verification sidewall samples will be collected for every Remedial Action Unit (RAU) that is adjacent to a pink area.

Comment 16

[Remedy Design]

- Section 4.9: Sampling of perched water is required to ensure that additives work. As written, it is not clear what the proposal is if this does not work.

Response 16

The purpose of the additive is to treat the perched water to a level where the dissolved concentrations will be in compliance with perched water RELs.

Perched water treatment will not be deemed completed until the soil and perched water remedial actions are completed which will take several years of monitoring.

Post-remediation perched water monitoring will verify that the residual arsenic and lead concentrations in perched water are in compliance with cleanup levels (and subject to 5 year reviews).

Lab and Field Pilot studies have demonstrated that the additive is effective in treating arsenic and lead so that they are no longer sufficiently soluble in water to allow the contaminants to exceed dangerous waste designation levels.

In the unlikely event that the treatment does not work further treatment will be required and undertaken.

Comment 17

[Remedy Design]

- All wood containing debris must be taken to a hazardous waste landfill.

Response 17

Appendix D, Section D4.2 in the Remedial Design Report states: "...wood will not be reused on-Property and will be disposed of appropriately." Wood does not have to be taken to a hazardous waste facility unless it designates as hazardous waste under WAC 173-303 RCW. Note that the wooden Bldg. B was taken to a Subtitle C Landfill, because it did designate as hazardous waste. Additionally, per letter dated 4/8/2017 to TPCHD, it was stated that all wooden components (i.e., pilings) that were saturated will be going to a hazardous waste disposal facility and that these materials are not part of the WDA request for LRI disposal. A significant portion of the wood debris (things like tree root wads, for example) was introduced to the Site as fill material, along with material that is not contaminated.

Comment 18

- Wash water used to decontaminate trucks and wheels should be contained and tested for chemicals of concern.

Response 18

The CSWGP-approved Stormwater Pollution Prevention Plan (SWPPP) dictates and enforces the procedures by which no contaminated stormwater or wash water leaves the property. This activity will be monitored by the Ecology Water Quality Program (and possibly the City of Tacoma Stormwater Source Control at their discretion).

Per the SWPPP, wash water will be infiltrated into site soils.

The traffic pattern established for the Site dictates that truck traffic does not enter the exclusion zone, wherever that is located, as the excavations proceed around the Site.

The contractor has arranged with a street sweeping company that is simultaneously providing street maintenance for a project one parcel over (the former Reichhold facility), where extensive fill material is being brought in by a very high volume of truck traffic and they require considerably more street maintenance than the Superlon project would require.

Comment 19

[Remedy Design]

- Arsenic and lead-containing soil should not be used as backfill.

Response 19

All soils with arsenic and lead that exceed RELs for direct contact and soil-to-groundwater pathways will be removed and disposed of appropriately.

Comment 20

[Remedy Design]

- There is no apparent monitoring plan for either soil or groundwater monitoring. Such a plan should be put in place and the data available for public review. Monitoring wells should be reinstalled.

Response 20

Section 4.7 of the Remedial Design Report identifies the post-excavation monitoring plan.

Future monitoring for soils will be unnecessary since interim cleanup action objectives for soils will be met.

All sites remediated under MTCA that have residual contamination above applicable groundwater standards are monitored on a scheduled basis which will be defined in the final cleanup action plan, and are subject to 5 year reviews. Groundwater monitoring requirements will be developed once the entire site has been defined, as the entire site will require groundwater monitoring, not just the location of the interim action. Eight years of groundwater monitoring data has been collected. The results of the analyses are submitted to Ecology on an annual basis as a function of the remedial action work plans developed and performed on the site. Those results are available to the public through public records requests.

Groundwater is not being separately addressed in this interim remedial action, but the arsenic and lead concentrations in groundwater will likely decrease significantly as a result of removing the source of arsenic and lead contamination, i.e., affected soil.

Groundwater monitoring will continue during soil and perched water remediation and as long as groundwater on site remains contaminated above MTCA-derived standards. This monitoring

schedule will be defined in the final cleanup action plan.

Comment 21

[Remedy Design]

- The REL's are too high and should not be the final REL's for the site.

Response 21

The RELs are appropriate for the current and future land use at the site, which, as a function of the Environmental Covenant, will remain Industrial.[7]

[7] Please see the highlighted sections of the Environmental Covenant for the Former Kaiser Aluminum Site, attached as an exhibit (on first 5 pages), to see an example of protectiveness requirements used for typical Tideflats Industrial Cleanup properties.