



## 1. RESPONSE TO PUBLIC COMMENTS ON PROPOSED FINAL REMEDIAL ACTION FOR NORTHSTAR PROJECT

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This document responds to public comments received on the proposed final remedial action for the Northstar Project in Salem, Oregon. A public notice announcing a 30 day comment period running from July 1 to July 31, 2017 on the proposed remedial action was posted in Secretary of States Bulletin on July 1st, the Statesman Journal on June 30<sup>th</sup> and the Keizer Times on June 30<sup>th</sup>. The notice was also posted on DEQ's public website and mailed to the City of Salem, Oregon Department of Transportation (ODOT), the property owner and over 200 adjacent property owners near the site, the transport route and the farm site on Windsor Island Road (farm site). At the request of the City of Keizer and Oregon Department of Agriculture (ODA), DEQ extended the public comment for two weeks to end on August 14, 2017. A notice of the extension was provided to adjacent property owners, the City of Salem, City of Keizer, ODOT, ODA, the Keizer Times, the Statesman journal, and to those who provided comments. The notice was also posted on DEQ's website, provided to more than 2,300 subscribers on DEQ's Environmental Cleanup Program Daily Bulletin subscription list, and issued as a news release.

Comments were received from about 60 individuals, the City of Keizer, Marion County, Department of State Lands, and Army Corp of Engineers. The comments are grouped by similarity and paraphrased below, followed by DEQ's response.

### 1.1 Dust Generation during Soil Transport

Several comments objected to the trucking and transport of the soil containing dieldrin from the cleanup site on public roads through Salem and Keizer due to the dirt and dust that could be released during transport and the effect it could have on community health. There were questions about how trucking and transport would be monitored for safety, dust and spills.

**DEQ Response:** DEQ toxicologists do not expect risk standards to be exceeded in the air or dust during soil removal or transport activities based on the levels in the soil being removed. Additionally, dust production is expected to be much less during transport than site excavation and loading work. To confirm that risk standards for dieldrin would not be exceeded during these activities, dust and air was monitored during the preliminary soil excavation work that was conducted on the east side of the site between August 7 and 15, 2017. Dieldrin was not detected in any of the air samples.

A truck cleaning and dust control plan for soil loading and transport has been prepared by Anderson Geologic, the environmental consultant for the project. The plan calls for the construction of temporary roadways and specific loading areas on the development site made with clean crushed rock for truck loading and hauling. Trucks are to remain on the temporary

roadways and loading areas at all times to minimize the generation of dust. Trucks will be carefully loaded to minimize spillage. Before exiting the site, all trucks will be inspected and cleaned of loose dirt and mud. The trucks will be washed to rinse the exterior as well as lightly wet the soils to help suppress any dust during transport. The soil in the truck will be securely covered with a tarp. After the soil is unloaded at the receiving site, the trucks will be swept clean before returning to the road. Dust suppression will also be done at the site receiving the soil.

I&E Construction, the main contractor, will have a spill prevention, response and safety plan prepared prior to the offsite transport of any soil containing dieldrin above the residential standard. The plan will be available for viewing on DEQ's public website for the project.<sup>1</sup> All site personnel and drivers will be trained in dust control and truck cleaning procedures and in the spill prevention, response and safety plan. DEQ and/or the environmental contractor will periodically be onsite to inspect these activities. The City of Salem is also monitoring the site regularly for dust and erosion control.

As stated previously, DEQ does not expect risk standards to be exceeded in the air or dust during soil removal and transport activities based on the levels in the soil being removed. To confirm this, the dust and air was monitored during the preliminary soil excavation activities that were conducted on the east side of the site between August 7 and 15, 2017. Dieldrin was not detected in any of the air samples.

The Oregon Health Authority is also a good resource for health related concerns and questions. For questions or concerns, contact Todd Hudson, Public Health Toxicologist by e-mail at [todd.hudson@dhsoha.state.or.us](mailto:todd.hudson@dhsoha.state.or.us), phone: 971-673-0024 and website <http://public.health.oregon.gov/PHD/Directory/Pages/program.aspx?pid=64>.

## 1.2 Truck Impacts during Transport

Comments and objections were made to the large amount of truck traffic through Keizer during soil transport activities. There were concerns about the number of trucks, the traffic, the noise and the road damage.

**DEQ Response:** DEQ does not have any regulatory authority over truck or other traffic on public roads. This concern is something that would need to be discussed with the City of Keizer/Salem, Marion County and the Oregon Department of Transportation. The contractor's plan involves trucks returning with clean fill from the Windsor Island Quarry that is located near the farm site. This will enable trucks to travel loaded during both trips, which should reduce truck traffic/trips since the farm site and the quarry are located in the same area.

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<sup>1</sup> To access site summary information and other documents in the DEQ Environmental Cleanup Site Information database, go to <http://www.oregon.gov/deq/Hazards-and-Cleanup/env-cleanup/Pages/ecsi.aspx> select "Search complete ECSI database", then enter 6036 in the Site ID box and click "Submit" at the bottom of the page. Next, click the link labeled 6036 in the Site ID/Info column.

### **1.3 Dust and Contaminated Soil during Site Excavation Work (Dust Control, Tracking Contamination and Health and Safety)**

There were several comments and concerns about the health and protection of nearby residents and onsite workers during excavation of dieldrin contaminated soil on the development site. Questions arose about how the soil and dust will be managed during excavation work so that it is not released to the environment, will not adversely affect workers or nearby residents, and is not tracked all over the site.

**DEQ Response:** DEQ toxicologists do not expect risk standards to be exceeded in the air or dust during soil removal activities based on the levels in the soil being removed. However, to confirm that risk standards for dieldrin would not be exceeded during these activities, dust and air was monitored during the preliminary soil excavation activities that were conducted on the east side of the site between August 7 and 15, 2017. Dieldrin was not detected in any of the air samples.

A dust control plan for soil excavation, loading and transport has been prepared by Anderson Geologic, the environmental consultant for the project. The plan is available on DEQ's Website for the project.<sup>1</sup> While some dust is inevitable, dust emissions will be controlled to the extent possible. The plan calls for wetting the soil using water trucks and/or sprinklers prior to excavation. Soils are to be kept moistened during excavation, loading, and grading to minimize visible dust emissions. Workers will take precautions while driving on the site to minimize dust. A temporary roadway and specific loading areas made with clean crushed rock for truck loading and hauling will be constructed prior to the work. Trucks will remain on the temporary roadway or loading areas at all times to minimize the generation of dust. Trucks will be carefully loaded to minimize spillage and dust. Before exiting the site, all trucks will be inspected and cleaned of loose dirt and mud. The exterior of the trucks will be rinsed and the soils lightly wetted to help suppress any dust. The soil in the truck will be securely covered with a tarp. After the soil is unloaded at the receiving site, the trucks will be swept clean before returning to the road and the site. Dust suppression will also be done at the site receiving the soil.

The dust control plan was implemented starting August 7, 2017, when DEQ approved limited onsite preliminary excavation work on the east side of the property. DEQ staff and the City of Salem have been on the site to monitor the dust suppression activities. This plan was effective in minimizing dust.

As stated above, DEQ toxicologists do not expect risk standards for dieldrin to be exceeded in the air or dust during soil removal and transport activities based on the levels in the soil being removed. To confirm this, the dust and air were monitored during the preliminary soil excavation activities that were conducted on the east side of the site between August 7 and 15, 2017. Dieldrin was not detected in any of the air/dust samples.

The contractor is also required to have a Health and Safety plan meeting OSHA requirements and has requested a consultation with Oregon OSHA.

The Oregon Health Authority has been consulted on this project and may be contacted to discuss

any health related concerns. For questions or concerns, contact Todd Hudson, Public Health Toxicologist by e-mail at [todd.hudson@dhsosha.state.or.us](mailto:todd.hudson@dhsosha.state.or.us), phone: 971-673-0024 and website <http://public.health.oregon.gov/PHD/Directory/Pages/program.aspx?pid=64>.

## 1.4 Measuring Contamination Levels in the Soil

Comments were made that DEQ should monitor and measure contaminant levels in the soil during and after removal including soil sampling, surface sampling and dust sampling.

**DEQ Response:** Over 350 soil samples were analyzed from the site under DEQ oversight during environmental investigations completed by Multi-Tech Engineering and Anderson Geologic between 2015 and 2017. Soil samples were collected from land surface to about 30 inches below ground. The sampling defined the area of dieldrin contaminated soil that would require a remedial action. The Remedial Action Work Plan prepared by Anderson Geologic, dated March 28 2017, includes sampling of the soil after excavation to show that the remedial action was effective. If the post excavation samples show that the soil is still above the risk standards, then additional excavation and sampling will be completed until sampling shows the dieldrin in the soil meets or is below the residential risk standard.

DEQ toxicologists do not expect risk standards for dieldrin to be exceeded in the air or dust during soil removal and transport activities based on the levels in the soil being removed. To confirm this, the dust and air was monitored during the preliminary soil excavation activities that were conducted on the east side of the site between August 7 and 15, 2017. Dieldrin was not detected in any of the air/dust samples.

## 1.5 Residential Development on Contaminated Soil

Comments and concerns were made about building homes on the development site even if contamination is removed. Objections were made to using contaminated soil in the development of a residential community.

**DEQ Response:** DEQ's Cleanup Program does not routinely review and/or approve of changes in land use to evaluate whether the new use will meet or be protective of human health as defined for the Cleanup Program. In this case, the developer voluntarily requested DEQ's review of the situation and wanted to clean the site to meet our Cleanup Program residential soil standards before the site was developed. Most developments involving farm or industrial land transitioning to residential use are not evaluated by the DEQ nor required to.

At this site, soils containing dieldrin above risk levels that are acceptable for residential development will be removed prior to developing the site. Once these soils are removed, sampling will be conducted to confirm that remaining dieldrin levels in the soil are below residential risk and safe for residential use and development.

## 1.6 Contaminated Soil Designated as Clean Fill

Questions, comments and objections were made regarding the soil on the originating agriculture property that contains dieldrin being designated as “clean fill” and being placed in old quarry pits on a farm property north of Keizer.

**DEQ Response:** DEQ approved of moving the soil from one agriculture field that is planned for residential development to another agriculture field that is zoned and used for farming. While the dieldrin concentrations slightly exceed DEQ’s residential soil screening levels, they are extremely low and should be safe for farm use. This is because a resident who regularly gardens in their back yard is in direct contact with the soil far more frequently than a farmer plowing a field a couple times a year in a tractor. Because a resident is exposed more often and for a longer duration (we assume decades of living in the area when developing our screening levels), they have a higher risk from exposure to low levels of dieldrin in the soil than a farmer would. While pure dieldrin would be very concentrated and potentially dangerous, the concentrations in the farm soils are very low and would not present an acute (immediate) threat, so it is “clean fill for farm use,” but not for residential use.

## 1.7 Selecting a Different Alternate

Several commenters requested that DEQ choose a different alternative for the soil disposition including onsite treatment, onsite capping, or disposal at a permitted landfill.

**DEQ Response:** DEQ’s process requires that several balancing factors be evaluated and considered in a feasibility study when choosing a final remedy for a cleanup site. The factors include: the effectiveness and protectiveness of the remedy, the long-term reliability, how difficult or easily it can be implemented, any risk that could be associated with performing the action, and how reasonable is the cost. Anderson Geological prepared a feasibility study and evaluation of 5 alternatives including 1) no action (required by the process), 2) soil removal and onsite disposal, 3) soil removal with offsite disposal, 4) on site treatment, and 5) offsite disposal and reuse. All alternatives were scored and evaluated by the balancing factors. Alternative 5, offsite disposal and reuse ranked the highest out of all the alternatives. Anderson Geologic proposed this alternative as the final remedy. DEQ reviewed the report and agreed with the recommendation. DEQ is recommending Alternative 5 as the final recommended action.

Risks from moving the soil via trucks off-site is quite low. Trucking contaminated soil from cleanup sites is a common and practically an everyday occurrence. Most trucking of contaminated soils is not done under DEQ oversight or knowledge. As mentioned above, the developer will need approval for placing the soil in the quarries from multiple agencies. Our hydrogeologists have concluded that placing the soil there will be safe. If the developer is unable to obtain the necessary permits, we will work with them to evaluate alternative locations for disposal, should they want to do that.

## 1.8 Reusing the Soil for Growing Crops

Objections and concerns were raised about allowing food crops to be grown on the soil after it is relocated to the farm site on Windsor Island Road.

**Response from Oregon Department of Agriculture:** *Legacy pesticides like dieldrin, have been banned for decades. However, legacy pesticides and breakdown products remain in the environment long after their use. Dieldrin was legal and widely used in the Willamette Valley and throughout the U.S. from the 1950s to the 1970s on many crops, including strawberries and corn. Due to how long it takes for dieldrin to break down in the environment, detection in agricultural soils in the valley is relatively common, but at very low levels as is the case with the soils at the Northstar site.*

*People are primarily exposed to dieldrin when eating certain crops grown in soils where dieldrin was previously used. Crops such as squash, pumpkin, zucchini, and carrots are most apt to uptake dieldrin from the soils. Many crops do not uptake dieldrin or do so at very low rates. Hazelnuts are proposed to be grown at the new location. It's unlikely that hazelnut (filbert) trees uptake significant levels of dieldrin.*

## 1.9 Dust Production during Placement of Soil

Comments and concerns were raised regarding potential dust emissions during placement of the soil in the quarries at the farm site on Windsor Island Road.

**DEQ Response:** Dust will be visually monitored and dust control measures such as wetting the soil, will be implemented if needed when placing the soil in the quarries at the farm site. Additionally, the contractor plans to place three feet of clean fill on top of the agriculture soil.

## 1.10 Dieldrin Impacts to Groundwater and Surface Water

Concerns were raised that dieldrin in the soil could get into the local groundwater, surface water and nearby water wells after the soil is used to infill the quarries at the farm site.

**DEQ Response:** Hydrogeologists and licensed Geologists from DEQ reviewed the solid waste permit exemption application for the placement of the soil in the quarry pits and came to the conclusion that there are no potential groundwater impacts because dieldrin is not very soluble and binds tightly to the soil. This is why dieldrin is still present at low levels in the soil on the site and in other agriculture soils in the Willamette Valley even though it was banned in 1970's. If it were soluble, it would have washed out of the soil and would no longer be present.

## 1.11 Floodplain and Wetlands at the Farm Site

Comments were raised about the quarries at the farm site being located within the 100 year flood plain and/or a designated wetland.

**DEQ Response:** Floodplain and/or wetland issues at the proposed farm site may prevent, limit or delay the moving of the soil. DEQ will see to it that appropriate authorities have been consulted and all necessary permits are received prior to the transport of soil and infilling of the quarries.

## **1.12 Timeline and Schedule**

There were requests to have the timeline and project schedule posted.

**DEQ Response:** DEQ has developed a public website for the project where the schedule, updates and pertinent information will be posted. The website is located at: <http://www.oregon.gov/deq/Programs/Pages/Northstar.aspx>.

## **1.13 Public Meeting Request**

There were some requests for a public meeting or hearing.

**DEQ Response:** Oregon revised statutes require that DEQ hold a public meeting on a remedial action proposal if during the comment period we receive requests for a meeting from ten or more individuals or a group containing ten or more members (ORS 465.320 (2)). In this instance, we received only one request for a public meeting and four requests to be notified in the event there was going to be a public meeting. Based on the low number of requests, DEQ decided not to hold a public meeting on this proposed action. However, DEQ has met individually with some of the nearby homeowners and plans to continue our outreach and meet with the community and nearby residents as needed.