



## **Second Periodic Review**

North Star Lodge  
Facility/Site ID #: 55484252  
Cleanup Site ID #: 4116  
808 N 39th Ave  
Yakima, Washington 98902

Prepared by:  
Washington State Department of Ecology  
Central Region Office  
Toxics Cleanup Program

November 2013

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## 1.0 INTRODUCTION

This document is the Department of Ecology's second periodic review of post-cleanup site conditions and monitoring data to assure that human health and the environment are being protected at the North Star Lodge (Site). The cleanup at this Site was implemented under the Model Toxics Control Act (MTCA), Chapter 173-340 of the Washington Administrative Code (WAC). The first periodic review for this Site was completed in September 2008. This periodic review will evaluate the period from 2008 through 2013.

Cleanup activities at this Site were completed through the Voluntary Cleanup Program. The cleanup actions resulted in residual concentrations of lead, arsenic, and dichlorodiphenyltrichloroethane (DDT) that exceed MTCA Method A cleanup levels for soil established under WAC 173-340-740(2). As a result of residual contamination, institutional controls were required for the Site to be eligible for a no further action (NFA) determination. WAC 173-340-420(2) requires that Ecology conduct a periodic review of a site every five years under the following conditions:

- (a) Whenever the department conducts a cleanup action
- (b) Whenever the department approves a cleanup action under an order, agreed order or consent decree
- (c) Or, as resources permit, whenever the department issues a no further action opinion
- (d) And one of the following conditions exists:
  - 1. Institutional controls or financial assurance are required as part of the cleanup
  - 2. Where the cleanup level is based on a practical quantitation limit
  - 3. Where, in the department's judgment, modifications to the default equations or assumptions using site-specific information would significantly increase the concentration of hazardous substances remaining at the site after cleanup or the uncertainty in the ecological evaluation or the reliability of the cleanup action is such that additional review is necessary to assure long-term protection of human health and the environment.

When evaluating whether human health and the environment are being protected, the factors the department shall consider include [WAC 173-340-420(4)]:

- (a) The effectiveness of ongoing or completed cleanup actions;
- (b) New scientific information for individual hazardous substances of mixtures present at the Site;
- (c) New applicable state and federal laws for hazardous substances present at the Site;
- (d) Current and projected Site use;
- (e) Availability and practicability of higher preference technologies; and
- (f) The availability of improved analytical techniques to evaluate compliance with cleanup levels.

The department shall publish a notice of all periodic reviews in the Site Register and provide an opportunity for public comment.

## **2.0 SUMMARY OF SITE CONDITIONS**

### **2.1 Site History**

The North Star Lodge Site is located in the City of Yakima, Yakima County, Washington. The Site is comprised of tax parcels 181315-42406, -42407, -42408, and -42414, and covers approximately 3.5 acres. The Site is currently occupied by a cancer treatment center. Surrounding properties generally serve as administrative or health care facilities. A vicinity map is available as Appendix 6.1 and a Site plan is available as Appendix 6.2.

The Site was a portion of a larger orchard that operated for approximately 40 years prior to development in 1999. The North Star Lodge portion of the orchard was not the location of any known buildings, material storage areas, equipment washout areas, or other activities likely to concentrate pesticides or agricultural chemicals.

### **2.2 Cleanup Levels and Point of Compliance**

WAC 173-340-704 states that MTCA Method A may be used to establish cleanup levels at sites that have few hazardous substances, are undergoing a routine cleanup action, and where numerical standards are available for all indicator hazardous substances in the media for which the Method A cleanup level is being used.

MTCA Method A cleanup levels for unrestricted land use were determined to be appropriate for contaminants at this Site. The cleanup actions conducted at the Site were determined to be 'routine', few hazardous substances were found at the Site, and numerical standards were available in the MTCA Method A table for each hazardous substance. The MTCA Method A cleanup levels for arsenic, lead, and DDT are 20 ppm, 250 ppm, and 3 ppm, respectively.

For soil, the point of compliance is the area where the soil cleanup levels must be attained. For this Site, the point of compliance is established as soils throughout the Site.

### **2.3 Site Investigations**

In 1998, Fulcrum Environmental Consulting Inc. was hired to conduct a Phase I Site Assessment (ESA) of the property located at North 39th and Castlevale Avenue in Yakima, Washington. The Phase I ESA was conducted to facilitate new construction on Lots 1-3 of the Village View Business Park. Yakima Memorial Hospital purchased the lots for the purposes of planning and constructing a cancer care facility called the North Star Lodge.

The Phase I ESA conducted in 1998 determined that the Site had been occupied by a fruit orchard. Lead and arsenic contamination had been confirmed on surrounding properties with similar land use histories. Rather than conduct sampling at that time, it was assumed that the entire Site contained lead and arsenic concentrations in soil that exceeded MTCA Method A cleanup standards.

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Soil sampling was conducted prior to remedial activities in 1999. Lead, arsenic, and DDT were detected above an average depth of 2 feet below ground surface (bgs), and were not detected above natural background concentrations at depths below 6 feet bgs.

## **2.4 Remedial Activities**

On-site management of contaminated soils was selected as the most appropriate remedial action for the Site. This remedial option was selected because contamination is spread throughout the Site. Off-site disposal would have subjected the property owner to costs disproportionate to the environmental benefit. A remedial plan was drafted that incorporated Site investigation and remedial activities into the construction of the North Star Lodge.

Generally, contaminated surface materials from the Site were used as fill during construction. It was determined that approximately 1,800 cubic yards of material could not be used, and would need to be relocated off-site to accommodate final Site grading. These excess soils were relocated to the other side of 39th Avenue, to a property that has the same ownership as the Site and was part of the same historic orchard property. The relocated soil was graded and stabilized with grass. The site where the soil was relocated was eventually developed as a retirement and rehabilitation facility.

Approximately 1,200 cubic yards of contaminated soils were contained on-site as part of the remedial action. Due to Site grading requirements, most of this material was relocated to the south end of the Site. These materials were covered with impermeable parking, sidewalk, or building footprint areas; or were capped with 6 inches of clean topsoil and an additional 2 to 3 inches of landscaping material such as sod or bark.

## **2.5 Restrictive Covenant**

Because contamination was capped on the Site at concentrations exceeding MTCA Method A Cleanup levels, institutional controls were required for the Site to be eligible for a NFA determination. Institutional controls in the form of a restrictive covenant were recorded for the Site on May 9, 2002 and a NFA determination was issued by Ecology later that month. The conditions of the restrictive covenant are available below:

1. The Property contains Arsenic, Lead, and DDT concentrations in soil located under impermeable surfaces such as the building and associated asphalt areas; or under sod and 6" of clean topsoil in permeable surface areas such as landscaped areas. The Owner shall not alter, modify, or remove the existing structure or clean top soil/sod barrier in any manner that may result in the release or exposure to the environment of soil containing Arsenic, Leads, DDT, or create a new exposure pathway without prior written approval from Ecology.

Any activity on the Property that may result in the release or exposure to the environment of the soil containing Arsenic, Lead, DDT that was contained as part of the Remedial Action or create a new exposure pathway, is prohibited. Some examples of activities that are prohibited on this site include: drilling, digging, placement of any objects or use of

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any equipment which deforms or stresses the surface beyond its load bearing capability, piercing the surface greater than 6" with a rod, spike, or similar item, bulldozing or earthwork.

2. Any activity on the Property that may interfere with the integrity of the Remedial Action and continued protection of human health and the environment is prohibited.
3. Any activity on the Property that may result in the release or exposure to the environment of a hazardous substance that remains on the Property as part of the Remedial Action, or create a new exposure pathway, is prohibited without prior written approval from Ecology.
4. The Owner of the Property must give thirty (30) days advance written notice to Ecology of the Owner's intent to convey any interest in the Property. No conveyance of title, easement, lease or other interest in the Property shall be consummated by the Owner without adequate and complete provision for the continued operation, maintenance and monitoring of the Remedial Action.
5. The Owner must restrict leases to uses and activities consistent with the Restrictive Covenant and notify all lessees of the restrictions on the use of the Property.
6. The Owner must notify and obtain approval from Ecology prior to any use of the Property that is inconsistent with the terms of this Restrictive Covenant. Ecology may approve any inconsistent use only after public notice and comment.
7. The Owner shall allow authorized representatives of Ecology the right to enter the Property at reasonable times for the purpose of evaluating the Remedial Action; to take samples, to inspect remedial actions conducted at the Property, and to inspect records that are related to the Remedial Action.
8. The Owner of the Property reserves the right under WAC 173-340-440 to record an instrument that provides that this Restrictive Covenant shall no longer limit use of the Property or be of any further force or effect. However, such an instrument may be recorded only if Ecology, after public notice and opportunity for comment, concurs.

## **3.0 PERIODIC REVIEW**

### **3.1 Effectiveness of completed cleanup actions**

Clean soil, asphalt, and building structures continue to serve as a cap for the Site and eliminate human exposure pathways (ingestion, contact) to contaminated soils. Based upon the Site visit conducted on October 25, 2013, no repair, maintenance or contingency actions have been required. A photo log is available as Appendix 6.4.

The restrictive covenant for the Site was recorded and remains active. There is no evidence that another instrument has been recorded that might limit the effectiveness or applicability of the restrictive covenant. Appendix 6.3 is a copy of the restrictive covenant for the Site. This restrictive covenant prohibits activities that will result in the release of contaminants contained as part of the cleanup without Ecology's approval, and prohibits any use of the property that is inconsistent with the covenant. This restrictive covenant serves to assure the long term integrity of the cap.

Conclusions:

Soils with arsenic, lead and DDT concentrations above MTCA Method A cleanup levels are still present at the Site. However, the cap prevents human exposure to this contamination by ingestion and direct contact with soils. The restrictive covenant for the property will ensure that the integrity of the caps will be protected through maintaining the current use of the Site.

### **3.2 New scientific information for individual hazardous substances for mixtures present at the Site**

There is no new pertinent scientific information for the contaminants related to the Site.

### **3.3 New applicable state and federal laws for hazardous substances present at the Site**

The cleanup at the Site was governed by Chapter 173-340 WAC (1996 ed.). WAC 173-340-702(12) (c) [2001 ed.] provides that,

“A release cleaned up under the cleanup levels determined in (a) or (b) of this subsection shall not be subject to further cleanup action due solely to subsequent amendments to the provision in this chapter on cleanup levels, unless the department determines, on a case-by-case basis, that the previous cleanup action is no longer sufficiently protective of human health and the environment.”

Contamination remains at the Site above MTCA Method A cleanup levels and the cleanup action is still protective of human health and the environment.



### **3.4 Current and projected Site use**

The Site is currently used for commercial purposes. There have been no changes in current or projected future Site or resource uses.

### **3.5 Availability and practicability of higher preference technologies**

The remedy implemented included removal/recycling of hazardous substances as well as containment, and it continues to be protective of human health and the environment. While higher preference cleanup technologies may be available, they are still not practicable at this Site.

### **3.6 Availability of improved analytical techniques to evaluate compliance with cleanup levels**

The analytical methods used at the time of the remedial action were capable of detection well below MTCA Method A cleanup levels. The presence of improved analytical techniques would not effect decisions or recommendations made for the Site.

## **4.0 CONCLUSIONS**

- The cleanup actions completed at the Site are protective of human health and the environment.
- Soil cleanup levels have not been met at the Site; however, the cleanup action for the Property is determined to comply with cleanup standards under WAC 173-340-740(6) (f), since the long-term integrity of the containment system is ensured and the requirements for containment technologies have been met.
- The restrictive covenant for the property is in place and continues to be effective in protecting public health and the environment from exposure to hazardous substances and protecting the integrity of the cleanup action.

Based on this periodic review, the Department of Ecology has determined that the requirements of the Restrictive Covenant are being satisfactorily followed. No additional remedial actions are required by the property owner. It is the property owner's responsibility to continue to inspect the Site to assure that the integrity of the cap is maintained.

### **4.1 Next Review**

The next review for the Site will be scheduled five years from the date of this periodic review. In the event that additional cleanup actions or institutional controls are required, the next periodic review will be scheduled five years from the completion of those activities.

## 5.0 REFERENCES

Fulcrum Environmental Consulting, Inc. *Report of Voluntary Remedial Action*. March 2002.

Ecology. *No Further Action Determination Letter*. May 2002.

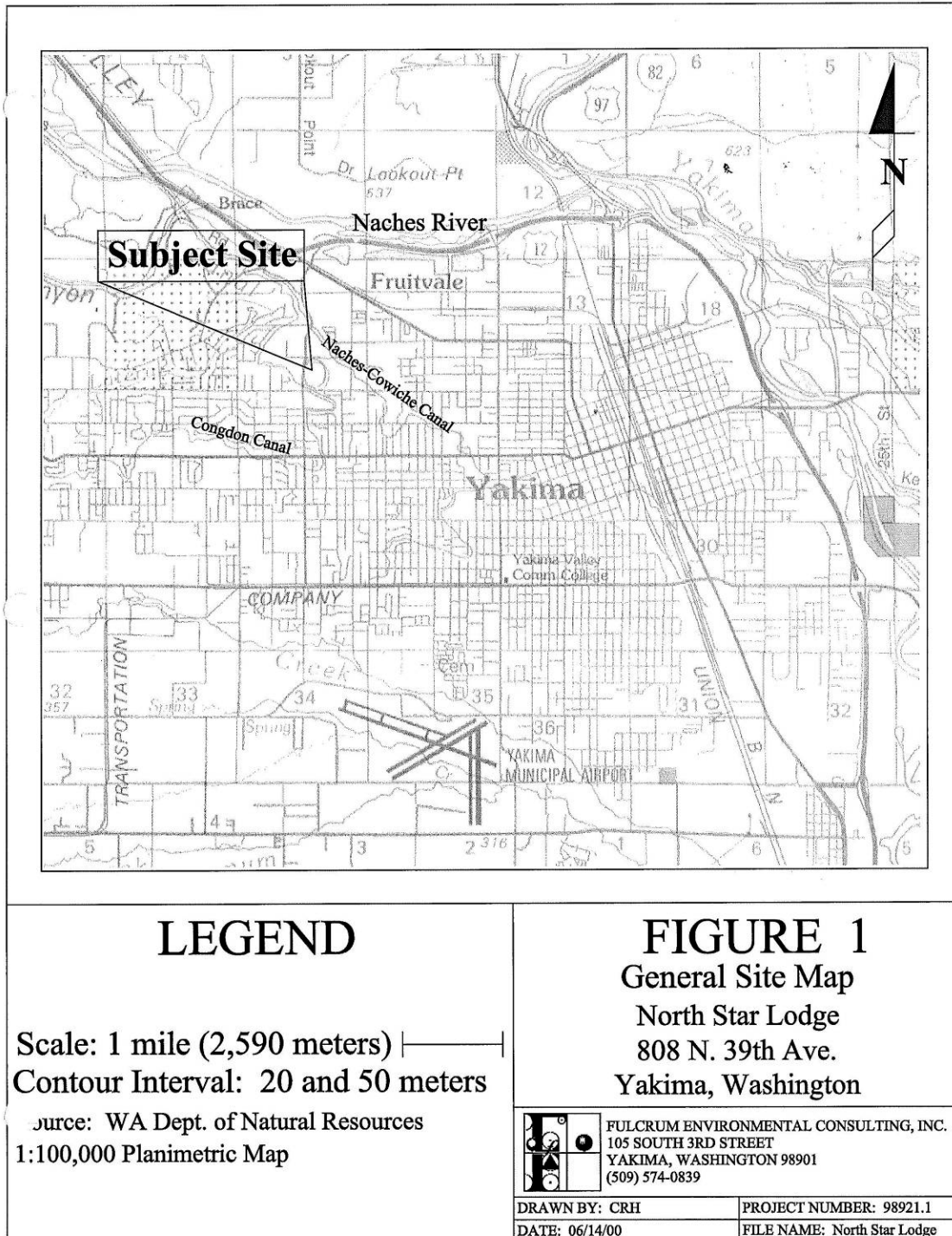
Ecology. *Restrictive Covenant*. May 2002.

Ecology. *Periodic Review*. September 2008.

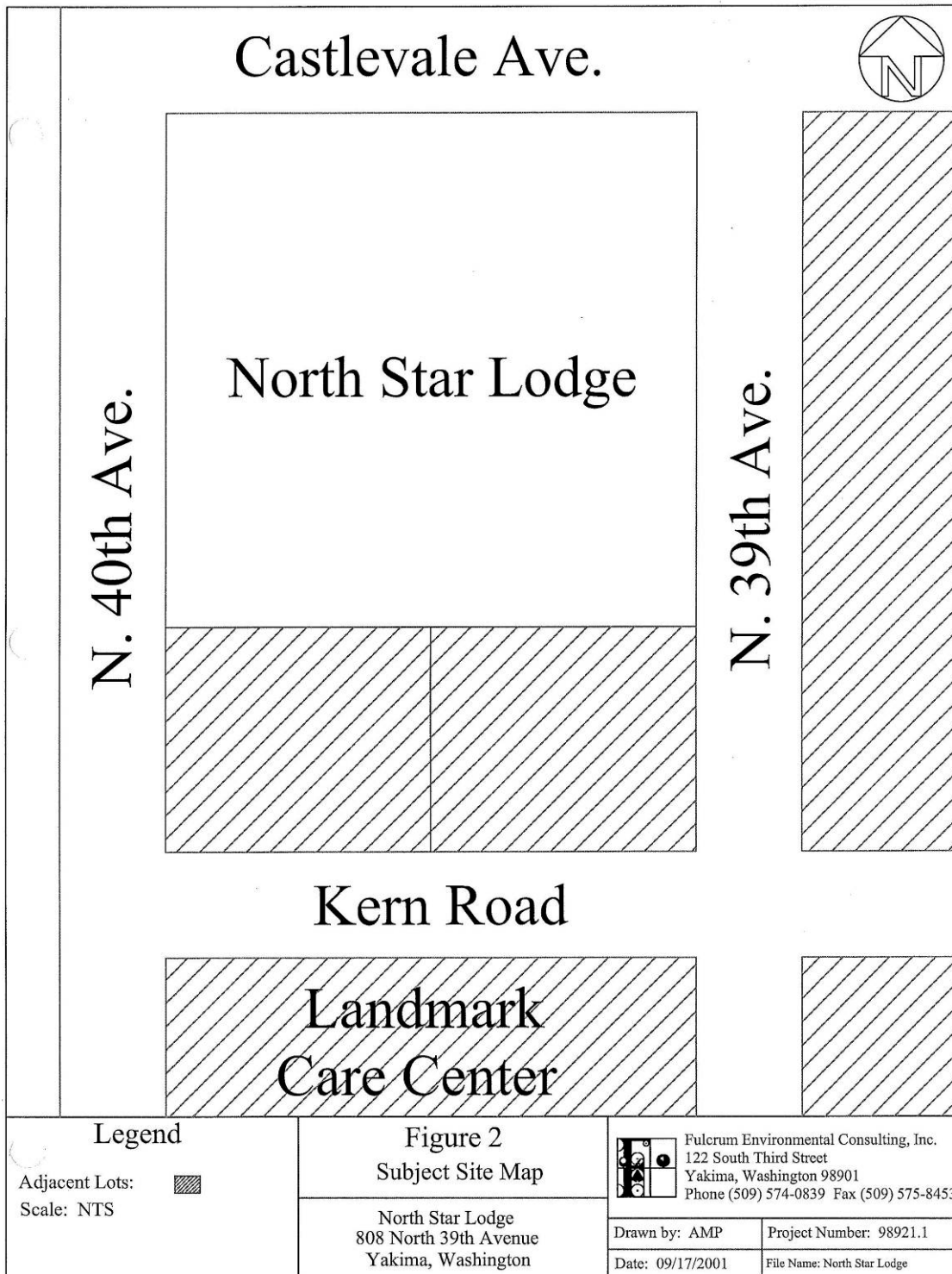
Ecology. *Site Visit*. October 25, 2013.

## **6.0 APPENDICES**

## 6.1 Vicinity Map



## 6.2 Site Plan



## 6.3 Environmental Covenant

Yakima Valley Memorial Hospital  
c/o Administration  
2811 Tieton Drive  
Yakima WA 98902

### Restrictive Covenant North Star Lodge

This Declaration of Restrictive Covenant is made pursuant to RCW 70.105D.030 (1) (f) and (g) and WAC 173-340-440 by Yakima Valley Memorial Hospital (hereafter "Memorial Hospital"), its successors and assigns, and the State of Washington Department of Ecology, its successors and assigns (hereafter "Ecology").

An independent remedial action (hereafter "Remedial Action") occurred at the property that is the subject of this Restrictive Covenant. The Remedial Action conducted at the property is described in the following document: Report of Voluntary Remedial Action prepared by Travis Trent of Fulcrum Environmental Consulting, Inc. This document is on file at Ecology's Central Regional Office.

This Restrictive Covenant is required by WAC 173-340-440 because the Remedial Action resulted in residual concentrations of Arsenic, Lead, and Dichlorodiphenyltrichloroethane (DDT) which exceed the Model Toxics Control Act Method A unrestricted use levels for soil established under WAS 173-340-740. Accordingly, certain engineering controls have been put in place on the Property to deal with such soil.

The undersigned, Memorial Hospital, is the fee owner of real property (hereafter "Property") in the County of Yakima, State of Washington, which is subject to this Restrictive Covenant. The Property is legally described as follows:

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**Parcels 42406, 42407, and 42408:** Lots 1,2, and 3, of Village View Business Park, according to the official plat thereof, recorded November 20, 1997, under Auditor's File No. 7035057, records of Yakima County, Washington.

**Parcel 42414:** Lot 9 of Village View Business Park, adjacent from the three above parcels, is also included within the deed covenant. This parcel was used to place soil removed from the above parcels.

Memorial Hospital makes the following declaration as to limitations, restrictions, and uses to which the Property may be put and specifies that such declarations shall constitute covenants to run with the land, as provided by law and shall be binding on all parties and all persons claiming



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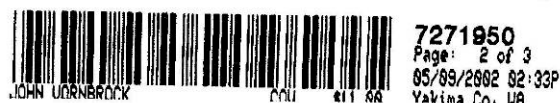
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under them, including all current and future owners of any portion of or interest in the Property (hereafter "Owner").

1. The Property contains Arsenic, Lead, and DDT concentrations in soil located under impermeable surfaces such as the building and associated asphalt areas; or under sod and 6" of clean topsoil in permeable surface areas such as landscaped areas. The Owner shall not alter, modify, or remove the existing structure or clean top soil/sod barrier in any manner that may result in the release or exposure to the environment of soil containing Arsenic, Leads, DDT, or create a new exposure pathway without prior written approval from Ecology.

Any activity on the Property that may result in the release or exposure to the environment of the soil containing Arsenic, Lead, DDT that was contained as part of the Remedial Action or create a new exposure pathway, is prohibited. Some examples of activities that are prohibited on this site include: drilling, digging, placement of any objects or use of any equipment which deforms or stresses the surface beyond its load bearing capability, piercing the surface greater than 6" with a rod, spike, or similar item, bulldozing or earthwork.

2. Any activity on the Property that may interfere with the integrity of the Remedial Action and continued protection of human health and the environment is prohibited.
3. Any activity on the Property that may result in the release or exposure to the environment of a hazardous substance that remains on the Property as part of the Remedial Action, or create a new exposure pathway, is prohibited without prior written approval from Ecology.
4. The Owner of the property must give thirty (30) days advance written notice to Ecology of the Owner's intent to convey any interest in the Property. The Owner shall consummate no conveyance of title, easement, lease, or other interest in the Property without adequate and complete provision for continued monitoring, operation, and maintenance of the Remedial Action.
5. The Owner must restrict leases to uses and activities consistent with the Restrictive Covenant and notify all lessees of the restrictions on the use of the Property. This provision shall not require notification of residents of individual beds or suites within the Property while being used essentially in its present fashion.
6. The Owner must notify and obtain approval from Ecology prior to any use of the property that is inconsistent with the terms of this Restrictive Covenant. Ecology may approve any inconsistent use only after public notice and comment.
7. The Owner shall allow authorized representatives of Ecology the right to enter the Property at reasonable times for the purpose of evaluating the Remedial Action, to take samples, to inspect remedial actions conducted at the property, and to inspect records that are related to the Remedial Action.





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8. The Owner of the Property reserves the right under WAC 173-340-440 to record an instrument that provides that this Restrictive Covenant shall no longer limit use of the Property or be of any further force or effect. However, such an instrument may be recorded only if Ecology, after public notice and opportunity for comment, finds it appropriate to do so.

Executed this 8th day of May, 2002.

MEMORIAL HOSPITAL

By:

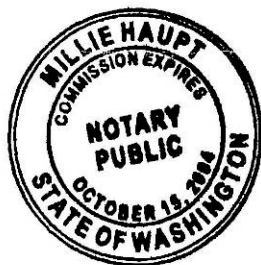
John G. Vornbrock

John G. Vornbrock  
Senior Vice President

State of Washington  
County of Yakima

I certify that I know or have satisfactory evidence that JOHN G. VORNBROCK is the person who appeared before me, and said person acknowledged that (he/she) signed this instrument, on oath stated that (he/she) was authorized to execute the instrument and acknowledged it as the Senior Vice President of Yakima Valley Memorial Hospital to be the free and voluntary act of such party for the uses and purposes mentioned in the instrument.

Dated: May 8, 2002



Millie Haupt  
Signature

Notary  
Title

My appointment expires 10-15-04



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Yakima Co., WA

## 6.4 Photo log

**Photo 1: Parking Lot - from the southeast**

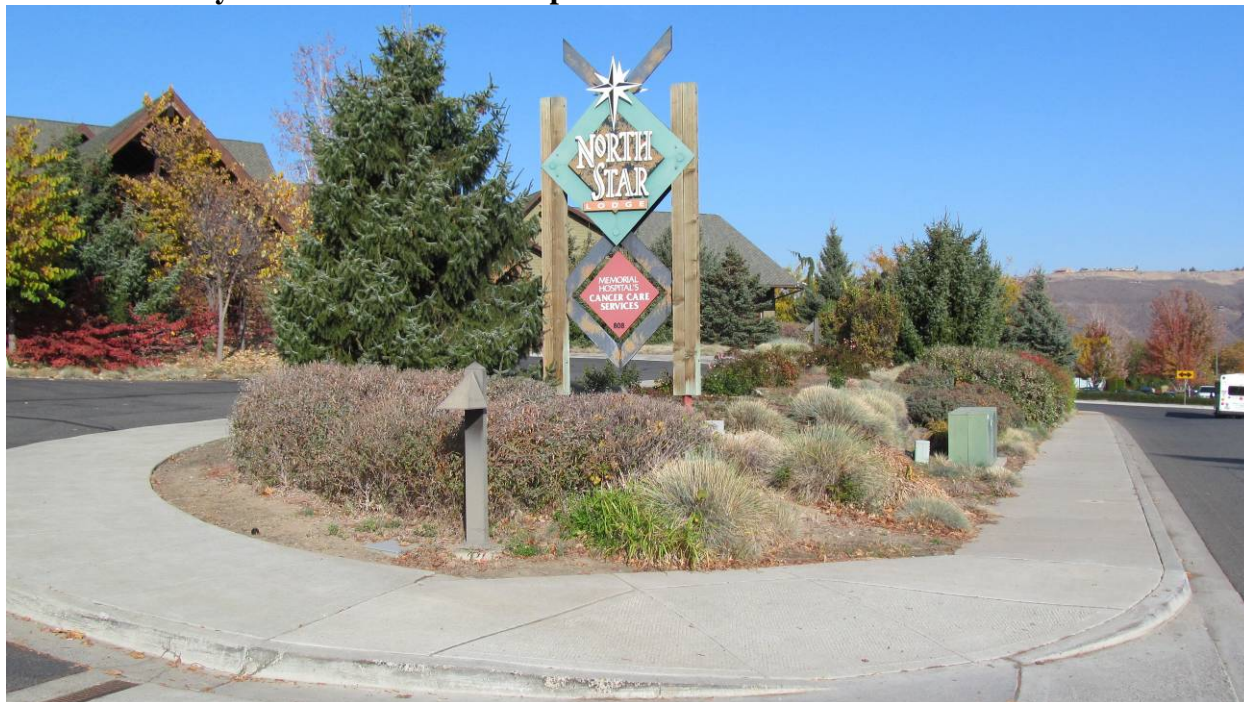


**Photo 2: Landscaped Walking Path - from the north**





**Photo 3: Facility Entrance and Landscaped Area - from the southeast**



**Photo 4: Facility Loading Zone – from the south**

