



Second Periodic Review

Columbia Chrome
4501 East Trent Avenue
Spokane, Washington 99212

Facility Site ID#: 35244355
Cleanup Site ID#: 3536

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

March 2016

1.0 INTRODUCTION.....	1
2.0 SUMMARY OF SITE CONDITIONS.....	3
2.1 Site History	3
2.2 Remedial Actions.....	3
2.3 Cleanup Levels and Points of Compliance	5
2.4 Restrictive Covenant.....	6
3.0 PERIODIC REVIEW	8
3.1 Effectiveness of Completed Cleanup Actions	8
3.1.1 Direct Contact	8
3.1.2 Protection of Groundwater.....	8
3.1.3 Institutional Controls	8
3.2 New Scientific Information for Individual Hazardous Substances or Mixtures Present at the Site.....	8
3.3 New Applicable State and Federal Laws for Hazardous Substances Present at the Site..	9
3.4 Current and Projected Site Use.....	9
3.5 Availability and Practicability of Higher Preference Technologies	9
3.6 Availability of Improved Analytical Techniques to Evaluate Compliance with Cleanup Levels	9
4.0 CONCLUSIONS	10
4.1 Next Review.....	10
5.0 REFERENCES.....	11
6.0 APPENDICES.....	12
6.1 Vicinity Map	13
6.2 Site Plan	14
6.3 Restrictive Covenant.....	15

1.0 INTRODUCTION

This document is a review by the Washington State Department of Ecology (Ecology) of post-cleanup site conditions and monitoring data to assure human health and the environment are being protected at the former Columbia Chrome facility (Site). Cleanup at this Site was implemented under the Model Toxics Control Act (MTCA) regulations, Chapter 173-340 Washington Administrative Code (WAC). This is the second periodic review conducted for this Site. The first periodic review was completed in February 2010. This periodic review will evaluate the period from February 2010 through October 2015.

Cleanup activities at this Site were completed under the Voluntary Cleanup Program (VCP). The cleanup actions resulted in residual concentrations of metals that exceeded MTCA Method A cleanup levels for soil established under WAC 173-340-740(2). It was determined that institutional controls in the form of a restrictive covenant (Covenant) would be required for the site to be eligible for a No Further Action (NFA) determination. WAC 173-340-420(2) requires Ecology to conduct a periodic review of a site every five years under the following conditions:

1. Whenever Ecology conducts a cleanup action;
2. Whenever Ecology approves a cleanup action under an order, agreed order, or consent decree;
3. Or, as resources permit, whenever Ecology issues a no further action opinion;
4. And, one of the following conditions exists:
 - (a) Institutional controls or financial assurance are required as part of the cleanup.
 - (b) Where the cleanup level is based on a practical quantitation limit.
 - (c) 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 Ecology 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.
- (f) The availability of improved analytical techniques to evaluate compliance with cleanup levels.

Ecology 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 Site is located at 4501 East Trent Avenue in the City of Spokane in Spokane County, Washington. The Site is located in a commercial and industrial district and is bordered to the north and east by a storage unit facility, to the west by a diesel truck repair facility, and to the south by Trent Avenue and additional industrial businesses. The property includes one building and associated exterior parking/storage area. The Site is zoned Business (B-2), although the Site use is industrial.

Prior to 1978, the subject property use was residential, farming, or commercial. In 1978, the property was sold to Westmont Tractor. In 1981, the property was sold to GAA Partnership and had two occupants/operators: General Truck Equipment (1981 – 1986) and Columbia Chrome (1990 – 1998).

During Columbia Chrome's occupation of the property, chromium was used in a liquid form for chrome plating. Petroleum products were used in hydraulic repair and lathe operations. Lubricating and hydraulic oils were the primary petroleum products abandoned on Site.

Site soils consist of gravel, cobbles, and silt with occasional boulders. Groundwater is located approximately 45 feet below ground surface (bgs).

A vicinity map is available as Appendix 6.1, and a Site plan is available as Appendix 6.2.

2.2 Remedial Actions

While Columbia Chrome operated at the Site, Ecology received several complaints of chromic acid dumping. Ecology conducted a Site visit in the late 1990s and made the following observations:

- The only area where there was an apparent intentional chromium release was by the truck bumper area. The area had both liquid chromium and sandblast residuals. Chromium contamination was evident by orange tints in the soil. Records also indicated that a large quantity chromic acid spill occurred from an outside dipping operation or chromic acid loading/transfer overfill.
- Assorted oils and lubricants were stored outside at the rear of the building. Drums were closed, but stacked inside inadequate secondary containment on unpaved areas. Visual staining was evident in this area.
- A series of floor sumps were in the shop area. Both the shop floor and floor sumps were concrete lined.
- A sewer pipe cleanout line ran along the east side of the shop area and emptied into a septic tank.

-
- A partially filled 10-gallon container of industrial cleaning solvent was present at the Site. No other solvents were present. Paperwork indicated that solvents had been sent off-site while Columbia Chrome was in operation.

During an initial investigation in 1999, the septic tank was located east of the building. The septic system was still in operation at the time. The wastewater outfall pipe between the building and the septic tank was cut and connected to a new line to the city sewer system in 1999. The contents of the tank were sampled and disposed of at a regional landfill.

Following the initial investigation, a limited Site characterization was conducted, which consisted of focused sampling followed by area-wide sampling. Initially, the sampling focused on the multiple visually contaminated areas, including excavation of contaminated soil. The remaining unexcavated areas were sampled on a grid system. In June 2000, ten areas were excavated, and seven of these were sampled. The remaining three areas required additional excavation to determine the extent of contamination.

Following initial remedial excavation activities, an area wide grid-sampling program was conducted to identify any other potential releases at the Site. The remaining unpaved storage area and active use areas of the property were included, as well as the septic system located under the asphalt pavement. The truck bumper area was also included to determine if additional areas of chromium contamination were present. A hollow-stem auger was used to collect shallow soil samples (6 inches to 3 feet bgs). Deeper samples were collected from 3.5 to 5 feet bgs; however, these deeper samples were not analyzed unless the shallow samples indicated the presence of contamination. All shallow samples were analyzed for total petroleum hydrocarbons (TPH), chromium, and lead.

Of the 79 samples collected, one sample had a chromium concentration (942 milligrams per kilogram [mg/kg]) exceeding the cleanup level; eight samples had lead concentrations exceeding the cleanup level (263 – 686 mg/kg); and four samples had TPH concentrations exceeding the cleanup level (205 – 3770 mg/kg).

Based on these results, deeper soil samples were then analyzed at those locations where contamination exceeded cleanup levels. The chromium concentration from the deeper sample at the point of shallow chromium exceedance was 117 mg/kg. Deep TPH concentrations at all four locations of shallow TPH exceedance were below the cleanup level. Since lead concentrations exceeded the Method A residential cleanup level (250 mg/kg), but were below the industrial cleanup level (1000 mg/kg), no deep samples were analyzed.

A backhoe was used to expose the septic tank leachate lines that were located approximately 4 feet bgs. Concrete plugs were found at the ends of two of the laterals. The north-south line was solid polyvinyl chloride (PVC), and the east-west lines were perforated. Soil samples were collected at each of the PVC pipe connections and termination points in September 2000. Samples were analyzed for total cadmium, chromium, mercury, lead, total petroleum

hydrocarbons diesel range (TPH-D), and total petroleum hydrocarbons oil range (TPH-O). Lead was elevated in two samples at concentrations of 1,330 mg/kg and 497 mg/kg. An additional 6 to 12 inches of soil was removed from those areas, and then they were resampled. Results were below Method A cleanup levels for both locations at 132 mg/kg and 53.8 mg/kg.

In December 2000, additional samples were core drilled in a grid pattern through the pavement to evaluate the soil under the perforated PVC leachate lines. TPH-O concentrations were above the cleanup level of 200 mg/kg at several locations, ranging from 232 mg/kg to 559 mg/kg. A lead concentration of 1,040 mg/kg was identified at a sample point just under the plastic pipe, exceeding the industrial cleanup level for lead in soil.

Three dry wells (designated A, B, and C) were located on the property. All three dry wells were plugged and not draining at the time of the assessment. In July 2000, a grab sample was collected from the sludge contents of dry well A, and the sample was analyzed for cadmium, chromium, and lead by Toxicity Characteristic Leaching Procedure (TCLP), benzene, toluene, ethylbenzene, TPH gasoline (TPH-G), TPH-D, and TPH-O. All metals were below TCLP limits. Toluene was detected at a concentration of 1.72 mg/kg; TPH-D and TPH-O were detected at concentrations of 607 mg/kg and 7,230 mg/kg, respectively. A vacuum truck was used to remove the contents of all three dry wells. The dry well perforations were then power-washed with water, and the wash water was also vacuumed out. A sample was collected from the bottom of dry well A after cleaning and was analyzed for total chromium, total lead, TPH-D, and TPH-O. None of the samples contained contamination above laboratory detection limits.

Final confirmatory sampling results from the Site show that total chromium values range from 7 to 117 mg/kg. Only one sample exceeds the cleanup level for chromium. Total lead values range from 20.6 to 1040 mg/kg. Of these, ten locations have lead concentrations exceeding the Method A residential cleanup level of 250 mg/kg (ranging from 263 to 329). Only one sample exceeds the industrial cleanup level of 1000 mg/kg. TPH-O values range from non-detect to 348 mg/kg. Only five locations have concentrations exceeding the cleanup level of 200 mg/kg (ranging from 215 to 348 mg/kg).

All excavated soils were temporarily stockpiled and stored on and covered by a liner (6 millimeter high-density polyethylene). A total of 157 tons of contaminated soil was sent to Graham Road Landfill for disposal.

2.3 Cleanup Levels and Points of Compliance

WAC 173-340-704 states 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.

For soil, the point of compliance is the area where the soil cleanup levels shall be attained. For soil cleanup levels based on the protection of groundwater, as they are for this Site, the point of compliance is established as soils throughout the Site.

2.4 Restrictive Covenant

It was determined the Site would be eligible for an NFA determination if institutional controls were used to document and protect remaining contamination. In 2001, institutional controls in the form of a Covenant were recorded for the Site, and an NFA letter was sent to the property owner. The Site status was changed to reflect an NFA determination.

The Covenant recorded for the Site in 2001 imposes the following limitations:

1. Any activity on the Property that may result in the release or exposure to the environment of the contaminated soil that was contained as part of the Remedial Action, or creates a new exposure pathway, is prohibited. Some examples of activities that are prohibited in the capped areas 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 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 creates a new exposure pathway, is prohibited without prior written approval from Ecology.
4. The Owner of the property must give thirty (30) day 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 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.
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.

A copy of the Covenant is available as Appendix 6.3.

3.0 PERIODIC REVIEW

3.1 Effectiveness of Completed Cleanup Actions

During the Site visit conducted on June 17, 2015, there were no indications that the integrity of the remedial action has been compromised. There was no evidence of undocumented Site excavation or disturbance activities, and no visual indications of disturbance of the Site surface. The Site continues to be occupied by an agricultural equipment manufacturing facility, and is surrounded by a mix of commercial and industrial properties. A photo log is available as Appendix 6.4.

3.1.1 Direct Contact

Cleanup actions at the Site were intended to eliminate human exposure to contaminated soils and groundwater at the Site. Exposure pathways to contaminated soils (ingestion, direct contact) were reduced by remedial excavation and by the presence of protective surfaces, including compacted gravel, asphalt, building foundations, roadways, and landscaped areas.

3.1.2 Protection of Groundwater

Soils with lead and chromium at concentrations exceeding MTCA Method A cleanup levels remain at the Site; however, the majority of the contaminated soil source material has been removed. Groundwater was not encountered during excavation and remedial activities, and groundwater is expected to be located at depths greater than 50 feet bgs at the Site. Due to the removal of significant source material, the age of the release, and the expected depth to groundwater, residual contaminated soils are not likely to pose a threat to groundwater quality in the future.

3.1.3 Institutional Controls

Institutional controls in the form of a Covenant were implemented at the Site in 2001. The Covenant remains active and discoverable through the Spokane County Auditor's Office. There is no evidence a new instrument has been recorded that limits the effectiveness or applicability of the covenant. This 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 Covenant serves to assure the long-term integrity of the surface cover and the remedial action.

3.2 New Scientific Information for Individual Hazardous Substances or Mixtures Present at the Site

There is no new relevant scientific information for the hazardous substances remaining at the Site.

3.3 New Applicable State and Federal Laws for Hazardous Substances Present at the Site

There are no new applicable or relevant state or federal laws for hazardous substances remaining at the Site.

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. The current Site use is not likely to have a negative impact on the protectiveness of the remedy.

3.5 Availability and Practicability of Higher Preference Technologies

The remedy implemented included containment of hazardous substances, and it continues to protect 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 below MTCA Method A cleanup levels. The presence of improved analytical techniques would not affect decisions or recommendations made for the Site.

4.0 CONCLUSIONS

- The cleanup actions completed at the Site appear to protect human health and the environment.
- Soil cleanup levels have not been met at the Site; however, the cleanup action is determined to comply with cleanup standards under WAC 173-340-740(6) (f), since the long-term integrity of the containment is ensured and the requirements for containment technologies have been met.
- The Covenant for the Site is in place and will 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, Ecology has determined the requirements of the Covenant are being 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 ensure cap integrity 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

Hoy Environmental Inc. *Site Cleanup- Sampling and Data Analysis Report*. December 2000.

Ecology. *VCP Review of Columbia Chrome*. March 20, 2001.

Ecology. *Restrictive Covenant*. November 5, 2001.

Ecology. *No Further Action Determination*. November 20, 2001.

Ecology. *Periodic Review*. February 2010.

Ecology. *Site Visit*. June 17, 2015

6.0 APPENDICES

6.1 Vicinity Map

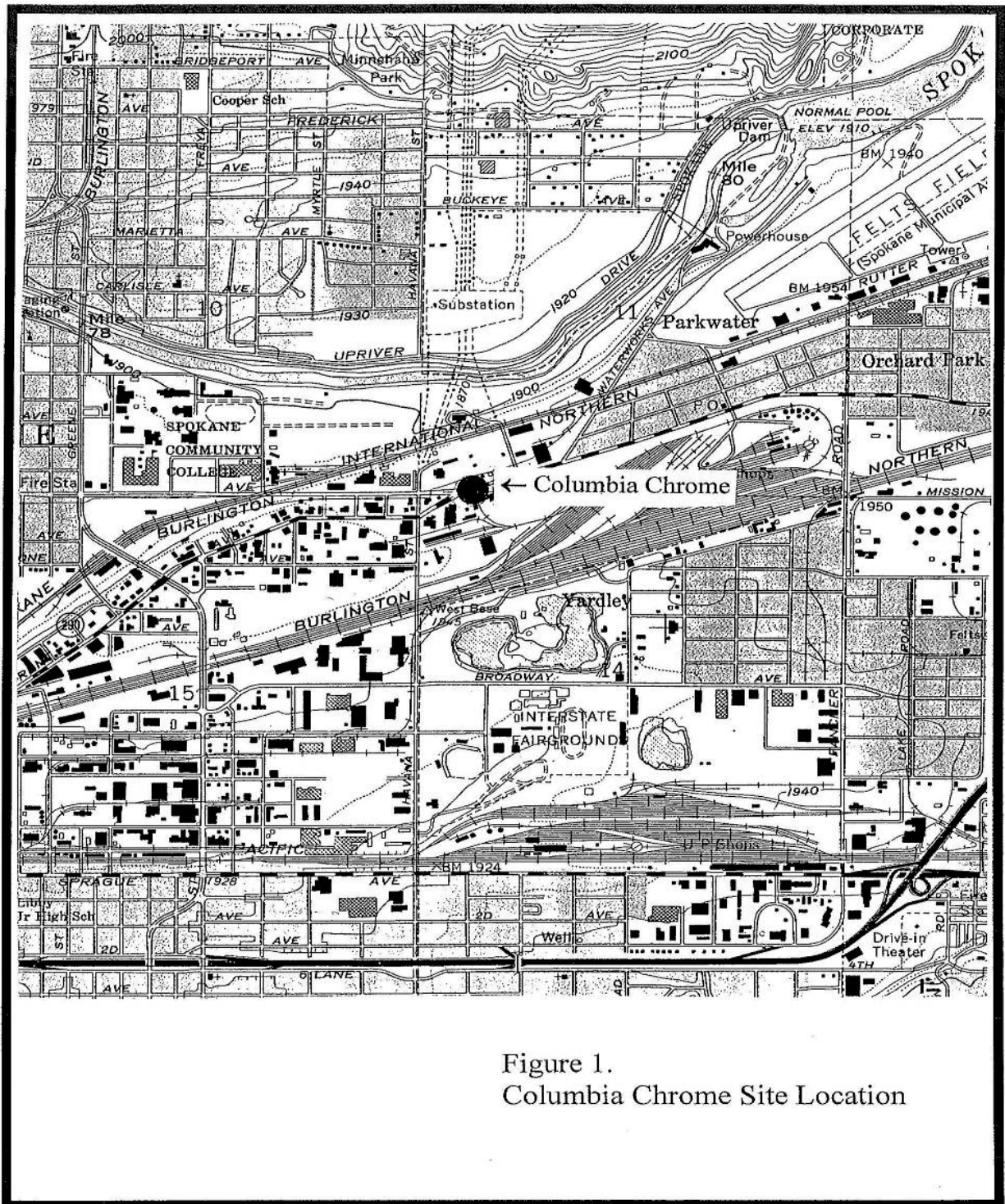


Figure 1.
Columbia Chrome Site Location

6.2 Site Plan

Columbia Chrome



Legend

-  Columbia Chrome Property
-  County Roads



0 70 140 280 Feet

6.3 Restrictive Covenant

MODEL RESTRICTIVE COVENANT
Page 1



RESTRICTIVE COVENANT

Property Owner: G.A.A. Partnership

Name of Property: Formerly Columbia Chrome
4501 E. Trent

This Declaration of Restrictive Covenant is made pursuant to RCW 70.105D.030(1)(f) and (g) and WAC 173-340-440 by G.A.A. Partnership, 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[s]: "Site Cleanup Sampling and Data Analysis Report," Prepared in December, 2000 by HOY Environmental, Inc. This document is on file at Ecology's Eastern Regional Office (ERO).

This Restrictive Covenant is required because the Remedial Action resulted in residual concentrations of lead and chromium which exceed the Model Toxics Control Act Method A OR B Residential Cleanup Levels for soil established under WAC 173-340-740.

The undersigned, G.A.A. Partnership, is the fee owner of real property (hereafter "Property") in the County of Spokane, State of Washington, that is subject to this Restrictive Covenant.



4650465
Page: 3 of 5
11/05/2001 03:36P
Spokane Co, WA

MODEL RESTRICTIVE COVENANT
Page 2

The affected Property is legally described as follows:

PARKWATER, That portion of blocks 69 and 72 DAF: Lots 7, and 8, block 72. S.18' of lots 17 and 18, block 69, and Vacated Commerce St. between lots 7, 8, block 72, and lots 17, 18, block 69, County of Spokane, state of Washington, and being that Northwest portion of parcel number 35113.1316.

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

Section 1. Any activity on the Property that may result in the release or exposure to the environment of the contaminated soil that was contained as part of the Remedial Action, or create a new exposure pathway, is prohibited. Some examples of activities that are prohibited in the capped areas 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 with a rod, spike or similar item, bulldozing or earthwork.

Section 2. Any activity on the Property that may interfere with



MODEL RESTRICTIVE COVENANT
Page 3

the integrity of the Remedial Action and continued protection of human health and the environment is prohibited.

Section 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.

Section 4. The Owner of the property must give thirty (30) day 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 continued monitoring, operation, and maintenance of the Remedial Action.

Section 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.

Section 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.

Section 7. The Owner shall allow authorized representatives of Ecology the right to enter the Property at reasonable times for



4650465
Page: 5 of 5
11/05/2001 03:36P
Spokane Co, WA

MODEL RESTRICTIVE COVENANT
Page 4

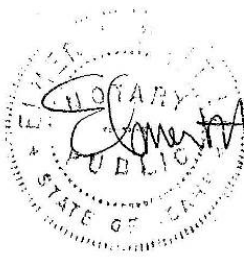
the purpose of evaluating the Remedial Action; to take samples,
to inspect remedial actions conducted at the property, and to
inspect records that are related to the Remedial Action.

Section 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.

G.A.A. Partnership
G.A.A. Partnership

Nov. 1, 2001
[DATE SIGNED]

[NOTE: The Property Owner must have this Restrictive Covenant
notarized.]



Notary
My commission expires 06-16-2004

6.4 Photo Log

Photo 1: Columbia Chrome Site - from the southeast



Photo 2: North End of Site - from the south



Photo 3: Secured Gravel Portion of Site - from the northeast



Photo 4: Secured Site Entrance – from the south

