Response Action Contract
Contract No. 68-W-98-228

EPA United States Environmental Protection Agency

REGION 10

Five-Year Review Report

(Third) Five-Year Review
United Chrome Products Site
Corvallis, Oregon
March 2003

URS Greiner
in association with
CH2M HILL
White Shield, Inc.

Five-Year Review Report

(Third) Five-Year Review Report

for

United Chrome Products

ORD009043001

Corvallis

Benton County, Oregon

March 2003

PREPARED BY:

USEPA Region 10
Oregon Operations Office
Portland, Oregon

Approved by: Date: 3/31/03

Michael F. Gearheard

Director, Environmental Cleanup Office

U.S. EPA Region 10

CVO\030520001

Five-Year Review Summary Form

SITE IDENTIFICATION		
Site name (*from WasteLAN*): United Chrome Products Superfund Site		
EPA ID (*from WasteLAN*): ORD009043001		
Region: 10	**State:** OR	**City/County:** Corvallis/Benton
SITE STATUS		
NPL status: ☒ Final ☐ Deleted ☐ Other (specify)		
Remediation status (choose all that apply): ☐ Under Construction ☒ Operating ☐ Complete		
Multiple OUs?* ☐ YES ☒ NO	**Construction completion date:** 8 / 15 / 1988	
Has site been put into reuse? ☒ YES ☐ NO Small portion of site redeveloped for propane distribution		
REVIEW STATUS		
Lead agency: ☒ EPA ☐ State ☐ Tribe ☐ Other Federal Agency		
Author name: Alan Goodman		
Author title: Remedial Project Manager	**Author affiliation:** U.S. EPA, Region 10	
Review period:** 12 / 4 / 2002 to 3 / 24 / 2003		
Date(s) of site inspection: 12 / 5 / 2002 and 1 / 11 / 2003		
Type of review: ☐ Post-SARA ☒ Pre-SARA ☐ NPL-Removal only ☐ Non-NPL Remedial Action Site ☐ NPL State/Tribe-lead ☐ Regional Discretion		
Review number: ☐ 1 (first) ☐ 2 (second) ☒ 3 (third) ☐ Other (specify)		
Triggering action: ☐ Actual RA On-site Construction at OU #___ ☐ Actual RA Start at OU # NA ☐ Construction Completion ☒ Previous Five-Year Review Report ☐ Other (specify)		
Triggering action date (*from WasteLAN*): 3 / 24 / 1998		
Due date (*five years after triggering action date*): 3 / 24 / 2003		

* ["OU" refers to operable unit.]
** [Review period should correspond to the actual start and end dates of the Five-Year Review in WasteLAN.]

Five-Year Review Summary Form, cont'd.

Issues:

Although no specific cleanup standard for soil was identified in the ROD, the upper zone remedy is not expected to achieve further chromium concentration reductions in upper zone soil. The levels currently present will prevent the site from achieving an unrestricted use and unrestricted exposure status.

Concerns have been expressed in the past about subsurface soil contamination that might be present beneath the concrete floor of the former United Chrome Products building. Subsurface soil sampling performed beneath the floor during a July 2000 investigation did not reveal the presence of elevated chromium concentrations (*United Chrome – Phase 2 Upper Zone Groundwater Source Investigation Results* (CH2M HILL August 2000).

The deep aquifer remedy was not successful in blocking or controlling the drainage of chromium contaminated pore water from the upper aquitard. Consequently, it is unlikely that the ROD performance standard for deep aquifer groundwater can be achieved, and compliance demonstrated, at two of the eight remaining well locations.

Concerns regarding historical chromium contamination detected in offsite sediments have also been raised.

Recommendations and Follow-up Actions:

Evaluate the hydrogeology and contaminant transport between the soil, upper zone, upper aquitard, and lower aquifer as necessary to understand the causes of the recent groundwater contaminant trends. Based on the results of this evaluation, re-evaluate the clean-up levels and current remedial approach.

Place additional institutional controls for land use restrictions as needed.

Collect data on site-related contamination in the down-gradient drainage ditches and water bodies, and then evaluate the ecological risks posed by these sediments.

Protectiveness Statement(s):

A protectiveness determination of the remedy at the United Chrome Products site cannot be made at this time until further information is obtained. Further information to determine whether the remedy currently protects human health and the environment will be obtained by the data collection and ecological evaluation of the down-gradient drainage ditches and surface water. It is expected that these actions will take six months to complete, at which time a protectiveness determination will be made. The soil and lower aquifer remedy currently protects human health and the environment because the site is fenced and not being used and the area of the lower aquifer with contamination above the chromium MCL is not being used for drinking water. Additional actions described in the recommendations above are needed to ensure long-term protectiveness.

Other Comments:

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Acronyms and Abbreviations

aka	Also known as
ARARs	Applicable or relevant and appropriate requirements
bgs	below ground surface
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Act Information Systems
CIC	Community Involvement Coordinator
City	City of Corvallis
DEQ	Oregon Department of Environmental Quality
DW	Extraction Well (deep aquifer)
ESD	Explanation of Significant Difference
EW	Extraction Well (upper zone)
FAA	Federal Aviation Administration
FS	Feasibility study
gpm	gallon per minute
HDPE	high-density polyethylene
HSP	Health and Safety Plan
Kg	Kilogram
L	Liter
LTRA	Long-term Remedial Action
MCL	Maximum Contaminant Level
mg	Milligram
MSDS	Materials Safety Data Sheet
MW	Monitor Well
NPL	National Priorities List
O&M	Operation and Maintenance

OAR	Oregon Administrative Rules
ORS	Oregon Revised Statutes
OWRD	Oregon Water Resources Department
PCOR	Preliminary Closeout Report
POTW	publicly owned treatment works
PPE	personal protective equipment
PRG	Preliminary Remedial Goal
PVC	Polyvinyl Chloride
PZ	Piezometer
RAC	Remedial Action Contract
RCRA	Resource Conservation and Recovery Act
RI	remedial investigation
ROD	Record of decision
RP	Responsible Party
RPM	Remedial Project Manager
SARA	Superfund Amendment and Reauthorization Act
SSC	site safety coordinator
SPLP	Synthetic Precipitation Leaching Procedure
TCLP	Toxicity Characteristic Leaching Procedure
USEPA or EPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service

Executive Summary

This report presents the findings of the third five-year review performed for the United Chrome Products Superfund site located in Corvallis, Oregon. The five-year review was performed to confirm that immediate threats to human health and the environment have been addressed through implementation of the selected remedy.

The five-year review, which was conducted in accordance with the *Comprehensive Five-year Review Guidance* (U.S. Environmental Protection Agency, June 2001), included the following activities:

- Review of changes to Federal, State and local regulations that could affect the remedy's overall protectiveness with respect to the performance standards specified in the Record of Decision.
- A site inspection to confirm that the remedy is operating and being maintained in accordance with expectations.
- Interviews with community representatives and local residents to obtain an independent appraisal of the cleanup effort and to identify any remaining concerns associated with the site.
- Review of performance monitoring data to determine compliance with the groundwater performance standards specified in the Record of Decision and to assess current and long-term protectiveness.

This five-year review has concluded that a protectiveness determination of the remedy at United Chrome cannot be made at this time until further information is obtained. The soil and lower aquifer remedy currently protects human health and the environment because the site is fenced and not being used and the area of the lower aquifer with contamination above the MCL is not being used for drinking water. Additional actions described in the recommendations in Section 8 are needed to ensure long-term protectiveness.

Based on the long-term protectiveness findings, it is recommended that the remedy and groundwater cleanup goals specified in the Record of Decision be re-evaluated in light of the current understanding of subsurface conditions, and expectations for future site land and groundwater beneficial uses. To determine if chromium contamination detected in historical sediment samples poses a risk to ecological resources, it is recommended that the results of surface water and sediment sampling recently completed by the responsible party be reviewed against potentially applicable standards.

1. Introduction