



Third Periodic Review

Wolfkill Feed and Fertilizer Royal City

5951 Highway 26 West, Royal City, Grant County
Facility Site ID 91132746, Cleanup Site ID 4587

Toxics Cleanup Program, Eastern Region

Washington State Department of Ecology
Spokane, Washington

October 2022

Document Information

This document is available on the Department of Ecology's [Wolfkill Feed and Fertilizer Royal City cleanup site page](#)¹.

Related Information

- Cleanup site ID: 4587
- Facility site ID: 91132746

Contact Information

Toxics Cleanup Program

Eastern Regional Office
Ted Uecker, Site Manager
4601 N. Monroe St.
Spokane, WA 99205
Phone: 509-342-5564

Website²: [Washington State Department of Ecology](#)

ADA Accessibility

The Department of Ecology is committed to providing people with disabilities access to information and services by meeting or exceeding the requirements of the Americans with Disabilities Act (ADA), Section 504 and 508 of the Rehabilitation Act, and Washington State Policy #188.

To request an ADA accommodation, contact the Ecology ADA Coordinator by phone at 360-407-6831 or email at ecyadacoordinator@ecy.wa.gov. For Washington Relay Service or TTY call 711 or 877-833-6341. Visit Ecology's website³ for more information.

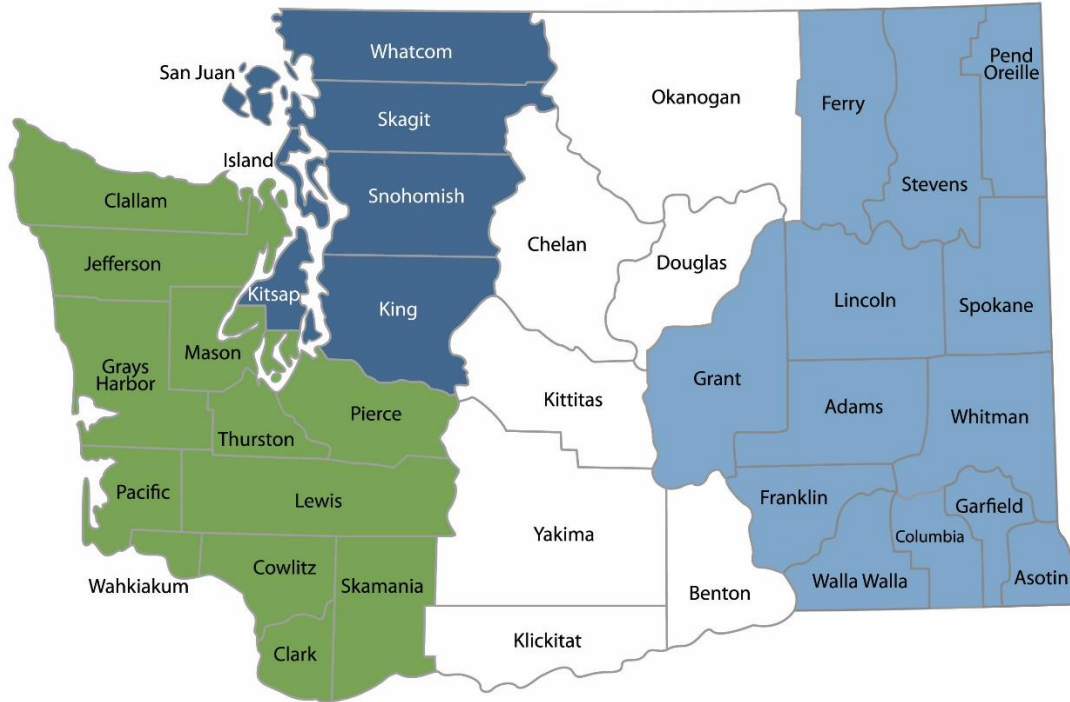
¹ <https://apps.ecology.wa.gov/cleanupsearch/site/4587>

² <https://ecology.wa.gov/About-us/Who-we-are/Our-Programs/Toxics-Cleanup>

³ <https://ecology.wa.gov/About-us/Accountability-transparency/Our-website/Accessibility>

Department of Ecology's Regional Offices

Map of Counties Served



Southwest Region 360-407-6300	Northwest Region 206-594-0000	Central Region 509-575-2490	Eastern Region 509-329-3400
----------------------------------	----------------------------------	--------------------------------	--------------------------------

Region	Counties served	Mailing Address	Phone
Southwest	Clallam, Clark, Cowlitz, Grays Harbor, Jefferson, Mason, Lewis, Pacific, Pierce, Skamania, Thurston, Wahkiakum	PO Box 47775 Olympia, WA 98504	360-407-6300
Northwest	Island, King, Kitsap, San Juan, Skagit, Snohomish, Whatcom	PO Box 330316 Shoreline, WA 98133	206-594-0000
Central	Benton, Chelan, Douglas, Kittitas, Klickitat, Okanogan, Yakima	1250 W Alder St Union Gap, WA 98903	509-575-2490
Eastern	Adams, Asotin, Columbia, Ferry, Franklin, Garfield, Grant, Lincoln, Pend Oreille, Spokane, Stevens, Walla Walla, Whitman	4601 N Monroe Spokane, WA 99205	509-329-3400
Headquarters	Across Washington	PO Box 46700 Olympia, WA 98504	360-407-6000

Table of Contents

Introduction.....	5
Summary of Site Conditions	6
Site history	6
Remedial actions.....	6
Cleanup levels	7
Groundwater monitoring.....	7
Restrictive Covenant	8
Periodic Review	9
Effectiveness of completed cleanup actions.....	9
New scientific information for individual hazardous substances or mixtures present at the Site	10
New applicable state and federal laws for hazardous substances present at the Site.....	10
Current and projected site and resource uses.....	10
Availability and practicability of more permanent remedies	10
Availability of improved analytical techniques to evaluate compliance with cleanup levels	10
Conclusions.....	10
Next review	11
References.....	12
Appendix A. Vicinity Map.....	13
Appendix B. Site Plan	14
Appendix C. Restrictive Covenant.....	15
Appendix D. Photo Log.....	20
Photo 1: Wolfkill Royal City excavation area – from the southeast.....	20
Photo 2: Wolfkill Royal City fueling pad – from the south.....	20
Photo 3: Second excavation area – from the southwest.....	21
Photo 4: East end of Site with typical Site use – from the southeast	21

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 Wolfkill Feed and Fertilizer Royal City site (Site). Site cleanup was implemented under the Model Toxics Control Act (MTCA) regulations, Chapter 173-340 Washington Administrative Code (WAC). This is the third periodic review conducted for this Site. Ecology completed the first periodic review in August 2009, and the second periodic review in April 2015. This periodic review evaluates site information from May 2015 through September 2022.

Cleanup activities at this Site were completed under the Voluntary Cleanup Program (VCP). Following cleanup, residual concentrations of nitrate in groundwater exceeding MTCA Method B cleanup levels remained at the Site. The MTCA Method B cleanup levels for soil and groundwater were established under WAC 173-340-740(3). Due to the presence of residual contamination, it was determined that the Site would be eligible for a no further action (NFA) determination if institutional controls were implemented in the form of a restrictive covenant (Covenant). 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 or mixtures present at the Site.
- c) New applicable state and federal laws for hazardous substances present at the Site.
- d) Current and projected Site and resource uses.

- e) Availability and practicability of more permanent remedies.
- 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.

Summary of Site Conditions

Site history

The Site is along Highway 26, east Royal City in Grant County, Washington. The Site is approximately 3 acres and is surrounded by agricultural property or undeveloped shrub-steppe land on all sides.

The Site, now owned by Cenex Harvest States (CHS), is used for the storage, mixing, and distribution of various herbicides and pesticides. The property is developed with an office building, a large metal storage building, two small wood storage buildings, and a maintenance shop and equipment storage building. A concrete containment area containing five aboveground storage tanks is adjacent to one of the small storage buildings. Equipment and vehicles associated with pesticide application are located throughout the property.

In general, Site soils consist of silt and sand overlying basalt bedrock. During monitoring well installation, silt was encountered from surface to depths of 14 to 18 feet below ground surface (bgs). Silty sand was encountered below the silt and extended to bedrock, which was found at depths ranging from 25 to 29 feet bgs. Depth to shallow groundwater ranges from 20 to 26 feet bgs, due to significant agricultural irrigation in the area. Groundwater flow is to the south-southwest. Depth to the regional aquifer in this area is estimated to be greater than 300 feet bgs.

A vicinity map is in Appendix A, and a Site plan is in Appendix B.

Remedial actions

In January 1997, a Site evaluation was conducted, and soil samples (TB-1 through TB-8) were collected from areas where soil contamination was most likely to occur due to usual operations at the facility. These areas included the dry fertilizer loading area, liquid fertilizer load out area, chemical load out area, chemical warehouse tanks, burn pit and wash area. Samples were analyzed for organic pesticides, herbicides, ammonia, and nitrate. Nitrate and ammonia levels were elevated at the dry fertilizer loading area. Varying levels of pesticides were found in the liquid fertilizer load out area, chemical load out area, chemical warehouse tanks, burn pit, and wash area; all concentrations were below cleanup levels.

A Limited Phase II environmental assessment was conducted in August 1998, and five borings (B-6 through B-10) were installed at the Site. Concentrations of nitrogen exceeding MTCA Method B cleanup level of 8,000 parts per million (ppm) were present in the samples from B-7

and B-9. Groundwater samples were collected from B-7 and B-9. Nitrate-nitrite concentrations were below the cleanup level in both groundwater samples.

Ecology issued a VCP opinion letter in June 1999 recommending installation of monitoring wells.

In November 1999, remedial soil excavation was conducted in the areas around borings B-7 and B-9. Because nitrogen was the primary contaminant of concern, it was decided that the excavated soil could be used for land application as part of the fertilizer program at a rate not to exceed 250 pounds of available nitrogen per acre. Metribuzin was also detected in samples collected from B-7 and B-9. It was determined that metribuzin was also acceptable for land application at a rate not to exceed the manufacturers recommendations. Soil was excavated from an area measuring 25 feet by 33 feet by 9 feet deep in the area around B-7. Soil was excavated from an area measuring 20 feet by 60 feet by 3 feet deep in the area around B-9. Samples collected from the limits of the excavations indicated the presence of nitrogen between 6 and 1,880 ppm.

Cleanup levels

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. When a MTCA Method A cleanup level is not available for a contaminant, MTCA Method B can be used.

MTCA Method A cleanup levels for unrestricted land use and MTCA Method B cleanup levels for direct contact non-cancer 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 or B table for each hazardous substance.

Groundwater monitoring

Three monitoring wells were installed in January 2000. Based on a limited knowledge of groundwater flow in the Site vicinity, these wells were installed in presumed down-gradient, cross-gradient, and up-gradient locations relative to the excavation area. The monitoring wells were installed to depths ranging from 35 to 42 feet below the existing grade.

Groundwater samples were collected for four consecutive quarters. Only nitrate concentrations exceeded MTCA Method B cleanup levels at concentrations up to 43,000 parts per billion. Metribuzin results were below detection limits.

Based on these results, Ecology determined a Covenant for groundwater would be required for the Site to be eligible for an NFA determination.

Restrictive Covenant

Ecology determined the Site would be eligible for an NFA determination if institutional controls were used to document the remaining contamination and protect the remedial actions. In 2004, institutional controls in the form of a Covenant were recorded for the Site. Ecology sent an NFA letter to the property owner and changed the Site status to reflect an NFA determination.

The Covenant imposes the following limitations:

1. No groundwater from the contaminated water zone may be taken for domestic use from the property. This zone includes all groundwater extracted from the upper 50 feet of the subsurface.
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 as part of the remedial action or that may create a new exposure pathway is prohibited.
4. The owner must give thirty days advance written notice to Ecology of the owner's intent to convey any interest in the Property.
5. The owner must restrict leases to uses and activities consistent with the Covenant.
6. The owner must notify and obtain approval from Ecology prior to any use of the Property that is inconsistent with the terms of the Covenant.
7. The owner or successor owner shall grant Ecology the right to enter the Site at reasonable times.
8. The owner or successor owner reserves the right to remove this Covenant with Ecology's approval.

A copy of the Covenant is in Appendix C.

Periodic Review

Effectiveness of completed cleanup actions

During the Site visit Ecology conducted on September 22, 2022, the Site currently operates as an agricultural produce storage facility and equipment maintenance facility. There is no evidence that additional wells have been installed for the purpose of groundwater extraction at the Site. Current CHS employees are aware of groundwater restrictions at the Site, and there are no potential routes of exposure to contaminated groundwater found beneath the Site. Surface covers and property use continue to prevent activities that may lead to exposure to residual contaminated soils and groundwater at the Site. A photo log is in Appendix D.

Direct contact

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

Protection of groundwater

There is no evidence that additional wells have been installed for the purpose of groundwater extraction at the Site. Current CHS employees are aware of groundwater restrictions at the Site, and there are no potential routes of exposure to contaminated groundwater found beneath the Site. Surface covers and property use continue to prevent activities that may lead to exposure to residual contaminated soils and groundwater at the Site.

Institutional controls

Institutional controls in the form of a Covenant were implemented at the Site in 2004. The Covenant remains active and discoverable through the Grant 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.

Summary

Groundwater with nitrate at concentrations exceeding the MTCA Method B cleanup level are still present at the Site. However, the structures and concrete or asphalt surfaces prevent human exposure to this contamination by ingestion and direct contact with groundwater. The Covenant for the property will ensure the integrity of the caps will be protected through property use restrictions.

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.

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

Cleanup levels for contaminants found at the Site have not changed since remedial actions were conducted. Contamination remains at the Site above MTCA Method B cleanup levels, and the cleanup action is still protective of human health and the environment.

Current and projected site and resource uses

The Site is used for industrial purposes; it remains occupied by CHS and is used to mix and distribute fertilizer products. There have been no changes in current or projected Site or resource uses.

Availability and practicability of more permanent remedies

The remedy implemented included containment of hazardous substances under a cap, and it continues to be protective of human health and the environment. While more permanent cleanup remedies may be available, they are still not practicable at this Site.

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 B cleanup levels for contaminants of concern at the Site. The presence of improved analytical techniques would not affect decisions or recommendations made for the Site.

Conclusions

- The cleanup actions completed at the Site appear to be protective of human health and the environment.
- Groundwater 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 surface cover is ensured.
- The Covenant for the property 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. The property owner is responsible for continuing to inspect the Site to assure the cap is maintained.

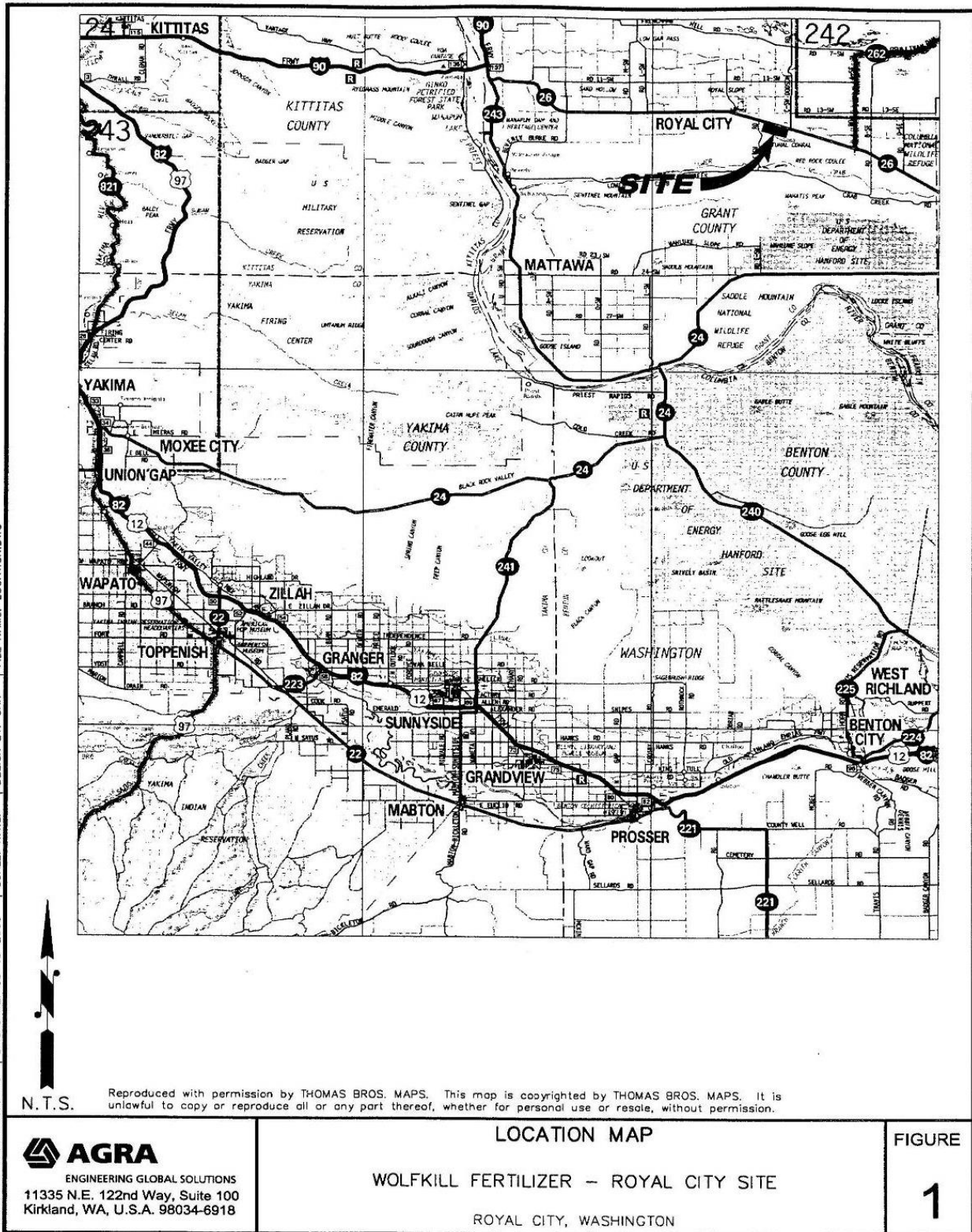
Next review

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.

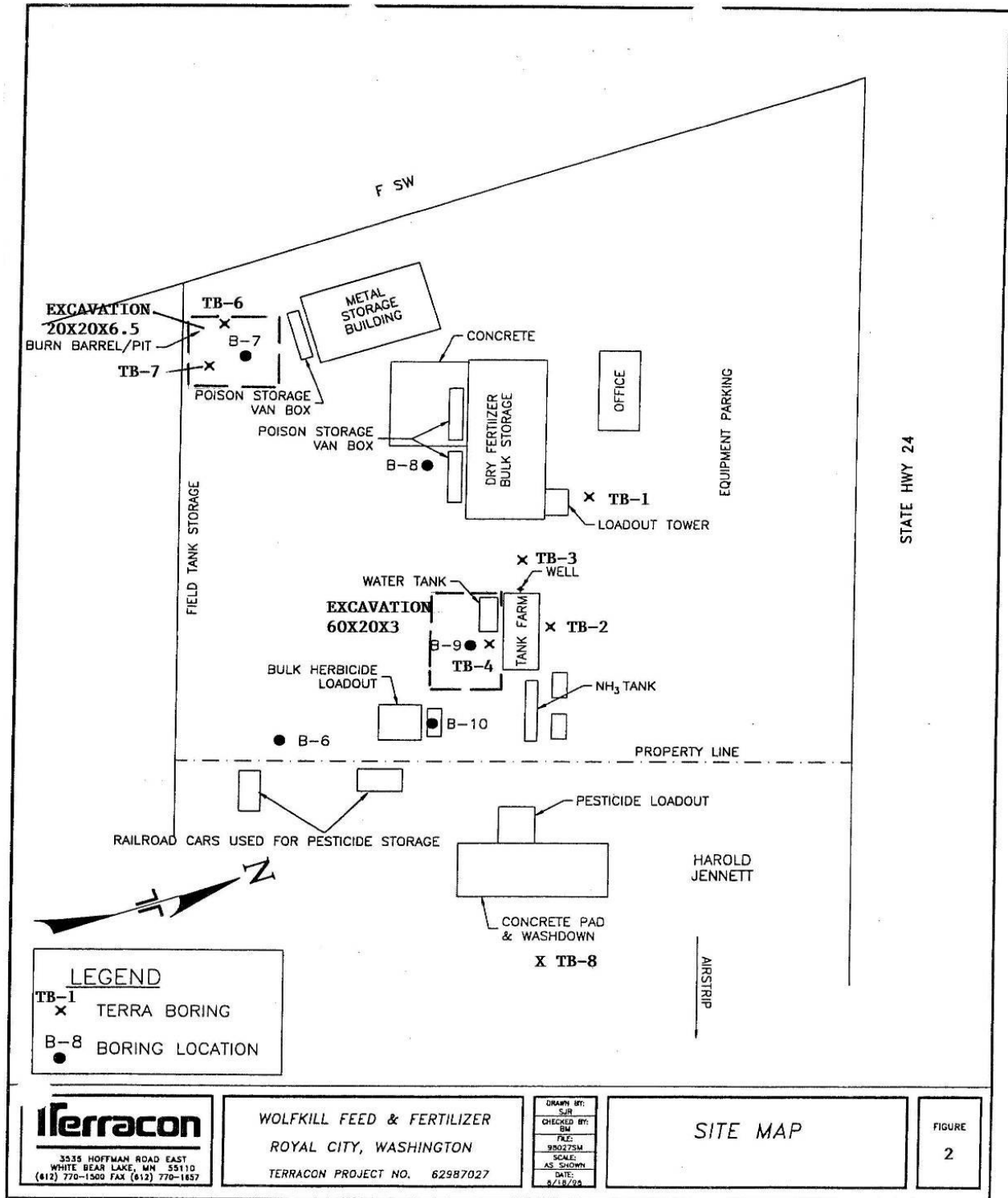
References

- Terracon. *Limited Phase II Environmental Site Assessment*. August 25, 1998.
- Wolfkill Feed and Fertilizer. *Preliminary Report of Remediation Results at the Royal City, Washington Fertilizer Facility*. April 7, 2000.
- AMEC. *Quarterly Groundwater Monitoring Report*. September 26, 2000.
- Ecology. "VCP Review." April 30, 2004.
- Ecology. *Restrictive Covenant*. December 16, 2004.
- Ecology. *Periodic Review*. August 2009.
- Ecology. *Periodic Review*. April 2015.
- Ecology. Site Visit. September 22, 2022.

Appendix A. Vicinity Map



Appendix B. Site Plan



Appendix C. Restrictive Covenant

WHEN RECORDED RETURN TO:

NAME: CHS INC Attn: Laurie Lenertz
ADDRESS: P.O. BOX 64089
CITY, STATE, ZIP: ST. PAUL, MN 55164-0089



MISC
24⁰²

GRANT COUNTY TITLE COMPANY

607 EAST RIVIERA AVENUE
MOSES LAKE WA 98837
(509) 765-8700

DOCUMENT TITLE(s)

1. RESTRICTIVE COVENANT
- 2.
- 3.
- 4.

REFERENCE NUMBER(s) OF DOCUMENTS ASSIGNED OR RELEASED:

☐ Additional numbers on page _____ of document

GRANTOR(s):

1. CHS INC.
- 2.
- 3.

☐ Additional names on page _____ of document

GRANTEE(s):

1. STATE OF WASHINGTON
- 2.
- 3.

☐ Additional names on page _____ of document

LEGAL DESCRIPTION

Lot-Unit: 106 Block: 85 Volume: Page:
Section: Township: Range:
Plat Name: COLUMBIA BASIN PROJECT
☐ Additional legal description is on page _____ of document

ASSESSOR'S PROPERTY TAX PARCEL ACCOUNT NUMBER(s): 21-0750-000

☐ Additional legal description is on page _____ of document

The Recorder will rely on the information provided on the form. The staff will not read the document to verify the accuracy or completeness of the indexing information provided herein.


1161162
Page: 1 of 5
12/18/2004 03:48P
GRANT COUNTY TITLE C COV 23.00 Grant Co Aud

COMPUTER COPY

COPY

RESTRICTIVE COVENANT

CHS Inc. f/k/a Cenex Harvest States Cooperatives, (Former
Wolfkill Feed and Fertilizer) Royal City, WA

This Declaration of Restrictive Covenant is made pursuant to RCW 70.105D.030(1)(f) and (g) and WAC 173-340-440 by CHS Inc. f/k/a Cenex Harvest States Cooperatives ("CHS"), 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 documents:

1. Phase I Environmental Site Assessment, Wolfkill Feed and Fertilizer Corporation, 5951 Highway 26 W, Royal City, Washington: Corporate Environmental, Land O'Lakes, Inc., June 3, 1998.
2. Limited Phase II Environmental Site Assessments, Wolfkill Feed & Fertilizer Corp., Mattawa and Royal City, WA: Terracon, August 25, 1998.
3. Preliminary Report of Remediation Results at the Royal City, Washington Fertilizer Facility: Wolfkill Feed and Fertilizer Corporation, 1999.
4. Monitoring Well Installation and Quarterly Groundwater Monitoring, Former Wolfkill Feed and Fertilizer Corporation - Royal City Facility: AGRA Earth & Environmental, Inc., April 7, 2000.
5. Quarterly Groundwater Monitoring (May 23, 2000), Former Wolfkill Feed and Fertilizer Corporation - Royal City Facility: AGRA Earth & Environmental, Inc., June 19, 2000.
6. Quarterly Groundwater Monitoring (August 25, 2000), Former Wolfkill Feed and Fertilizer Corporation - Royal City Facility: AMEC Earth & Environmental, Inc., September 26, 2000.
7. Request for No Further Action, Wolfkill Feed and Fertilizer, 5951 Highway 26, Royal City, Washington: AMEC Earth & Environmental, Inc., November 17, 2003.

These documents are on file at Ecology's Eastern Regional Office.

This Restrictive Covenant is required because the Remedial Action resulted in residual concentrations of nitrate/nitrite which exceed the Model Toxics Control Act Method B Cleanup Level

for groundwater established under WAC 173-340-720.

The undersigned, CHS, is the fee owner of real property (hereafter "Property") in the County of Grant, State of Washington, that is subject to this Restrictive Covenant. The Property is legally described in Exhibit A, attached hereto and incorporated herein.

CHS 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. No groundwater from the contaminated water zone may be taken for domestic use from the Property. This zone includes all groundwater extracted from the upper 40 feet of the subsurface.

Section 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.

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 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.

CHS Inc. f/k/a Cenex Harvest States Cooperatives

By: John McEnroe

Its: Vice President

Dated this 7 day of December, 2004

STATE OF Minnesota }

COUNTY OF Dakota } SS:

On this 7th day of December, 2004, before me, the undersigned, a Notary Public in and for said State, personally appeared John McEnroe to me personally known, who being by me duly sworn, did say that he is the Vice President of said corporation; that said instrument was signed on behalf of said corporation by authority of its Board of Directors; and that the said officer acknowledged execution of said instrument to be the voluntary act and deed of said corporation, by himself voluntarily executed.

Rebecca A. Anderson

Notary Public in and for said State

County

My commission expires: Jan 31, 2005

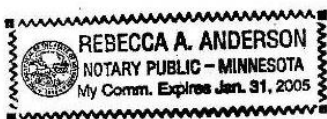


EXHIBIT A

THAT PORTION OF FARM UNIT 106, IRRIGATION BLOCK 85, FIRST REVISION, COLUMBIA BASIN PROJECT, GRANT COUNTY, WASHINGTON, AS PER PLAT FILED AUGUST 11, 1958, DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT ON THE WEST LINE OF SECTION 7, TOWNSHIP 16 NORTH, RANGE 26 EAST, W.M., THAT IS SOUTH $01^{\circ}31'00''$ WEST ON SAID SECTION LINE, 60.00 FEET FROM THE SOUTHERLY RIGHT OF WAY LINE OF SECONDARY STATE HIGHWAY NO. 26 (SSH 26), SAID POINT BEING THE NORTHWEST CORNER OF THAT PARCEL DESCRIBED UNDER AUDITOR'S FILE NO. 546053; THENCE SOUTH $72^{\circ}13'00''$ EAST ON A LINE PARALLEL WITH SAID STATE HIGHWAY RIGHT OF WAY AND ALONG THE NORTH LINE OF SAID PARCEL DESCRIBED UNDER AUDITOR'S FILE NO. 546053, 535.02 FEET; THENCE SOUTH $01^{\circ}31'00''$ WEST PARALLEL WITH THE WEST LINE OF SAID SECTION 7, 309.42 FEET TO THE SOUTH LINE OF PARCEL 2 DESCRIBED IN REAL ESTATE CONTRACT FILED UNDER AUDITOR'S FILE NO. 930222116; THENCE NORTH $86^{\circ}27'58''$ WEST ALONG THE SOUTH LINE OF SAID PARCEL 2 AND THE SOUTH LINE EXTENDED, 513.92 FEET TO THE WEST LINE OF SAID SECTION 7; THENCE NORTH $01^{\circ}31'00''$ EAST ALONG SAID SECTION LINE, 441.19 FEET TO THE POINT OF BEGINNING.

Appendix D. Photo Log

Photo 1: Wolfkill Royal City excavation area – from the southeast



Photo 2: Wolfkill Royal City fueling pad – from the south



Photo 3: Second excavation area – from the southwest



Photo 4: East end of Site with typical Site use – from the southeast

