Third
Five-Year Review Report

Syntex Facility Site
Verona
Lawrence County, Missouri

September 2007

Region 7
United States Environmental Protection Agency
Kansas City, Kansas

Approved by:

Cecilia Tapia, Director
Superfund Division
U.S. EPA, Region 7

9-27-07
Date:

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Attachments

List of Acronyms

ARARs	Applicable or relevant and appropriate requirements
ATSDR	Agency for Toxic Substances and Disease Registry
CD	Consent Decree
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
EPA	Unites States Environmental Protection Agency
FSSP	Fish and Sediment Sampling Plan
MCL	Maximum Contaminant Level
MDHSS	Missouri Department of Health and Senior Services
MDNR	Missouri Department of Natural Resources
NCP	National Contingency Plan
NEPACCO	Northeastern Pharmaceutical and Chemical Company
NPL	National Priorities List
NRC	National Research Council
O&M	Operation and maintenance
OSWER	Office of Solid Waste and Emergency Response
OU	Operable Unit
ppb	Parts per billion
ppm	Parts per million
ppt	Parts per trillion
ppq	Part per quadrillion
PRG	Preliminary Remediation Goals
RA	Remedial Action
RAO	Remedial Action Objectives
RCRA	Resource Conservation and Recovery Act
RD	Remedial Design
RD/RA	Remedial Design/Remedial Action
ROD	Record of Decision
RPM	Remedial Project Manager
SAP	Sampling and Analysis Plan
SVOC	Semi-volatile organic compounds
TBC	To be considered
TCP	Trichlorophenol
USC	United States Code
VOC	Volatile organic compounds
2,4,5-T	Trichlorophenoxy-acetic acid
2,3,7,8-TCDD	2,3,7,8-tetrachlorodibenzo-p-dioxin (Dioxin)

Executive Summary

A third five-year review has been performed for the Syntex Facility Superfund site (Site) located in Verona, Missouri. The Syntex Facility was formerly used to manufacture 2,4,5-trichlorophenoxy-acetic acid (2,4,5-T) in the 1960s, and later hexachlorophene in the late 1960s and early 1970s. Waste streams from these processes resulted in the contamination of surface soils with 2,3,7,8-tetrachlorodibenzo-p-dioxin (2,3,7,8-TCDD) [dioxin] in several areas of the site and released several volatile, semi-volatile, and inorganic contaminants into the shallow groundwater at the site. In addition, a trench area was used for disposal of drummed wastes from the facility.

Response actions at the site began in 1983 under an administrative order on consent. Response work at the site was eventually divided into two operable units (OUs). OU1 addressed dioxin-contaminated soils and equipment at the site and the trench area. OU2 was established to address groundwater. With the exception of the trench area, dioxin-contaminated soils exceeding an industrial clean-up level of 20 parts per billion (ppb) at the site were excavated beginning in 1988 and transported off site for final management using the Environmental Protection Agency (EPA) mobile incinerator located at the nearby Denney Farm site. All remaining areas with surface dioxin concentrations exceeding 1 ppb were covered with either a vegetated soil layer or an asphalt cap. As part of the current five-year review, all vegetative and asphalt capped areas were inspected and found to be in good condition.

In the trench area, there was a concern that excavation activities could disrupt the low permeability layers beneath the subsite. Therefore, although the area contained dioxin levels as high as 67 ppb and drums of unknown contents, no excavation for removal of the contaminated soil took place. The remedy included installation of a 12-inch clay layer followed by a 12-inch vegetative layer and an upgradient gravel interceptor trench. Monitoring wells were installed around the trench for post soil remediation monitoring. Trench well monitoring has continued on an annual basis and the data was provided for evaluation during the current five-year review. However, no approved plan defining monitoring and reporting requirements for the trench wells could be located in the document search conducted as part of the five-year review.

All dioxin-contaminated equipment was decontaminated and disposed off site as a solid waste.

Groundwater sampling was performed in 1997-1999 in accordance with a May 1993 Record of Decision (ROD) selecting no action with continued groundwater monitoring. The results of this groundwater sampling were evaluated in a draft risk assessment submitted to EPA by Syntex in February 2000. This risk assessment concludes that groundwater conditions at the Site are protective of human health and the environment. A review of the draft risk assessment and more recent OU2 groundwater data, during the current five-year review, supports this conclusion. However, the draft risk assessment and associated long-term monitoring program have not been finalized.

Institutional controls contained in the property deed restrict future land use to industrial. However, it is uncertain if current measures provide adequate assurance that non-protective exposure levels will not occur as a result of inappropriate land use. In addition, there are no specific restrictions in place for use of groundwater.

The remedy at the Site currently protects human health and the environment because all caps are intact and well maintained, institutional controls are in place, limiting site use to industrial, and exposure pathways to groundwater are not complete. However, in order for the remedy to remain protective in the long-term, (1) trench well monitoring and reporting requirements should be re-evaluated; (2) the OU2 risk assessment should be finalized along with the long-term monitoring and reporting requirements; (3) current land use restrictions should be re-evaluated to assure they are adequate to prevent non-protective exposure from occurring; and (4) the need for restrictions on groundwater use should be evaluated.

Five-Year Review Summary Form

SITE IDENTIFICATION		
Site name *(from WasteLAN)*: Syntex Facility		
EPA ID *(from WasteLAN)*: MOD007452154		
Region: 7	**State: MO**	**City/County: Verona/Lawrence**
SITE STATUS		
NPL status: √ Final ☐ Deleted ☐ Other (specify)		
Remediation status (choose all that apply): ☐ Under Construction ☐ Operating √ Complete		
Site Wide FYR √ YES ☐ NO	**Construction completion date:** 09 / 16 / 1998	
Has site been put into reuse? √ YES ☐ NO		
REVIEW STATUS		
Lead agency: √ EPA ☐ State ☐ Tribe ☐ Other Federal Agency _____		
Author name: Robert W. Feild		
Author title: Remedial Project Manager	**Author affiliation: U.S. EPA – Region 7**	
Review period: 12 / 20 / 2006 to 09 / 27 / 2007		
Date(s) of site inspection: 06 / 07 / 2007		
Type of review: √ Statutory ☐ Policy √ 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 Onsite Construction at OU #____ ☐ Actual RA Start ☐ Construction Completion √ Previous Five-Year Review Report ☐ Other (specify)		
Triggering action date *(from WasteLAN)*: 09 / 27 / 2002		
Due date *(five years after triggering action date)*: 09 / 27 / 2007		
Issues: 1. Trench Well Monitoring and Reporting Requirements 2. Finalization of OU2 Draft Risk Assessment and Long Term Groundwater Monitoring Plan 3. Adequacy of restrictive covenant to prevent inappropriate land use 4. Lack of Institutional Controls Restricting Use of Groundwater 5. Administrative Record should be confirmed at the Local Repository		

Recommendations and Follow-up Actions:

1. Trench Well monitoring and reporting requirements should be re-evaluated to ensure they are sufficient to maintain long-term protectiveness at the site.

2. The draft risk assessment for OU2 should be finalized and long-term monitoring needs should be determined with appropriate plans developed, approved, and implemented.

3. EPA should re-evaluate the need for more restrictive measures to prevent inappropriate land use that may result in non-protective exposure.

4. EPA should evaluate the need for institutional controls restricting groundwater use.

5. Confirm or Replace the Administrative Record at the Local Repository.

Protectiveness Statement(s):

The remedy at the Site currently protects human health and the environment because all caps are intact and well maintained, institutional controls are in place limiting site use to industrial, and exposure pathways to groundwater are not complete. However, in order for the remedy to remain protective in the long-term, trench well monitoring and reporting requirements should be re-evaluated, the OU2 risk assessment should be finalized along with the long-term monitoring and reporting requirements, current land use restrictions should be re-evaluated to assure they are adequate, and the need for restrictions on groundwater use should be evaluated.

Third Five-Year Review Report

1. Introduction

The purpose of five-year reviews is to determine whether the remedy at a site is protective of human health and the environment. The methods, findings, and conclusions of reviews are documented in five-year review reports. In addition, five-year review reports identify issues found during the review, if any, and recommendations to address them.

The United States Environmental Protection Agency (EPA) is preparing this five-year review pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Section 121(c) and the National Contingency Plan (NCP). CERCLA § 121(c) states:

If the President selects a remedial action that results in any hazardous substances, pollutants, or contaminants remaining at the site, the President shall review such remedial action no less often than each five years after the initiation of such remedial action to assure that human health and the environment are being protected by the remedial action being implemented. In addition, if upon such review it is the judgment of the President that action is appropriate at such site in accordance with section [104] or [106], the President shall take or require such action. The President shall report to the Congress a list of facilities for which such review is required, the results of all such reviews, and any actions taken as a result of such reviews.

EPA interpreted this requirement further in the NCP; 40 CFR § 300.430(f)(4)(ii) states:

If a remedial action is selected that results in hazardous substances, pollutants, or contaminants remaining at the site above levels that allow for unlimited use and unrestricted exposure, the lead agency shall review such action no less often than every five years after the initiation of the selected remedial action.

EPA Region 7 has conducted a five-year review of the remedial actions implemented at the Site in Lawrence County, Missouri. This review was conducted from March 2007 through September 2007. This report documents the results of the review.

This is the third five-year review for the Site. The triggering action for this review is the date of the second five-year review, dated September 27, 2002. The five-year review is required due to the fact that hazardous substances, pollutants, or contaminants remain on the site above levels that allow for unlimited use and unrestricted exposure.

2. Site Chronology

Table 1
Chronology of Site Events

Event	Date
Preliminary Assessment performed	11/1980
Site Investigation performed	11/1981
Final listing on National Priorities List (NPL)	9/08/83
Consent Decree for RD/RA finalized	9/13/83
Remedial Investigation/Feasibility Study complete (OU1)	3/3/88
Proposed Plan available for public comment (OU1)	3/21/88
Record of Decision (ROD) signed (OU1)	5/5/88
Excavation of dioxin-contaminated soils commenced	5/88
Remedial design completed (OU1)	9/12/89
Remedial action construction began (OU1)	9/30/89
Remedial Investigation/Feasibility Study complete (OU2)	8/9/92
Proposed Plan available for public comment (OU2)	8/11/92
Record of Decision (ROD) signed (OU2)	5/7/93
Facility sold to DuCoa L.P.	10/96
Discovered PCB contamination in spill area around small electrical building	4/97
Administrative Order on Consent – PCB removal and complete groundwater sampling	7/18/97
PCB Removal Action completion	9/29/97
First Five-Year Review	9/30/97
Final Inspection for OU1	1/98
Preliminary Close Out Report signed	9/16/98
Remedial Action Report	9/25/98
Second Five-Year Review	9/27/02

3. Background

A. Physical Characteristics

The Syntex Agribusiness, Inc. (Syntex) facility is located west of the city of Verona, population estimated at 725, in south-central Lawrence County in southwest Missouri. The facility occupies approximately 180 acres, primarily along the east bank of the Spring River, which flows northward through the length of the property. Refer to Figures 1 and 2 in Attachment A.

Most of the active portion of the facility is located within protected areas of the 100-year Spring River flood plain. The area is characterized by karst topographic features such as solution cavities and springs.

B. Land and Resource Use

The industrial facility is surrounded on three sides by property used for agricultural purposes. To the east of the site are the residential areas of the city of Verona. Scattered residences are located within the Spring River flood plain down gradient from the site. The Spring River is used for recreational and industrial purposes within southwestern Missouri.

Groundwater is not as a water supply for the site. Water used on-site is provided by a public water supply. During development of the 1993 Remedial Investigation, a records search of the available well logs showed no logs on file for private wells that were screened in the shallow bedrock aquifer or the Spring River alluvium within two miles downstream of the Site. However, during a well survey near the time of the RI development, EPA located and sampled three residential wells located within one mile downstream of the site. The analytical results from these well indicated the well water was not contaminated.

C. History of Contamination

In the 1960s, Hoffman-Taff, Inc. owned and operated the facility. Hoffman-Taff produced 2,4,5-trichlorophenoxy-acetic acid (2,4,5-T) for the U.S. Army as part of the production of the defoliant commonly known as Agent Orange. In 1969, Hoffman-Taff leased a portion of the

building at the facility to Northeastern Pharmaceutical and Chemical Company (NEPACCO) for the production of hexachlorophene. In 1969, Syntex purchased the facility at Verona from Hoffman-Taff.

The production of 2,4,5-T and hexachlorophene resulted in the potential formation of 2,3,7,8-tetrachlorodibenzo-p-dioxin (2,3,7,8-TCDD or dioxin) as an unwanted by-product. In the course of purifying the hexachlorophene, still bottom wastes were created which would have collected the dioxin. Dioxin-contaminated waste streams were managed in storage tanks and lagoons on site.

The site was proposed for the National Priorities List (NPL) on December 30, 1982, (Federal Register Volume 47, Number 251). On September 8, 1983, the NPL designation became final (Federal Register Volume 48, Number 175). The principal threats posed by the site were direct contact (ingestion, inhalation, and dermal) with dioxin-contaminated soil and wastes by humans and wildlife. The dioxin-contaminated soils, liquids, and sludges were also a potential source for groundwater contamination.

The property is currently the site of an active plant which produces food additives for human and animal foods and is an active Resource Conservation and Recovery Act (RCRA) facility. The production plant was sold by Syntex in the fall of 1996 to a Dupont/Con Agra conglomerate identified as DuCoa, L.P. In June 2001, the facility was again sold to BCP Ingredients, a subsidiary of Balchem. Syntex maintained ownership of certain portions of the site, including the trench area, and also maintained the environmental responsibility for all actions associated with the Superfund site.

The Site appears on the Missouri Registry of Confirmed Abandoned or Uncontrolled Hazardous Waste Disposal Sites. Accordingly, annual inspections of the facility are performed by the Missouri Department of Natural Resources (MDNR) staff. In May 2002, the listing of the Site was modified to divide the site into two separate listings to reflect the current ownership.

D. Initial Response

EPA and Syntex entered into an administrative order on consent in September 1983, pursuant to Section 106 of CERCLA, 42 U.S.C. § 9606, and Section 3013 of RCRA, 42 U.S.C. § 6934. The order required the following actions:

- posting of warning signs around specified disposal areas;
- development and submittal of a Sampling and Analysis Plan (SAP) to define the nature and extent of dioxin contamination;
- implementation of the SAP upon approval by EPA;
- development and submittal of a Fish and Sediment Sampling Plan (FSSP) upon approval by EPA;
- implementation of the FSSP upon approval by EPA;
- preparation and submittal of a Remedial Alternatives Report; and
- preparation and submittal of an Implementation Plan that would include plans and specifications for the preferred remedial alternative(s), schedule for implementation and reporting, description of the necessary reports and safety plans.

In 1988, EPA divided the site into two separate operable units (OUs). The contaminated soils and equipment were addressed under OU1, while the groundwater contamination was addressed by OU2.

E. Basis for Taking Action

Surface soils at the Site were determined to be contaminated with 2,3,7,8-TCDD above health-based levels for an industrial land use scenario. In addition, dioxin contamination detected on equipment formerly used at the Site exceeded a level of concern for protection of human health. Hazardous substances disposed in the trench area posed a potential risk to human health and the environment if not properly managed.

To date, EPA has not identified an unacceptable risk to human health or the environment due to potential exposure to groundwater contamination. The 1993 ROD for OU2 stated the following:

> EPA believes no further action is necessary for groundwater at the site to ensure protection of human health and the environment. Previous and ongoing remedial responses under operable unit 1 have greatly reduced the threat from past sources of contamination. Groundwater contaminant levels at this site are within the acceptable risk range established by the NCP.

> Ground and surface water monitoring will continue for two years following the issuance of this record of decision. An assessment will be conducted by EPA at the end of the monitoring program to ensure that this remedy remains protective of human health and the environment."

At the end of two years of monitoring from fall 1997 to fall 1999, Syntex submitted a risk assessment in February, 2000. The risk assessment concluded that risks associated with groundwater were within an acceptable range due to lack of completed exposure pathways. The 2002 Five-Year Review Report indicated EPA's general agreement with this conclusion. Groundwater monitoring continued on a select number of wells. Data from six sampling rounds between August 2003 and August 2006 were reviewed as part of the current five-year review.

4. Remedial Actions

A. Remedial Objectives

Remedial action objectives consist of media-specific or operable unit specific goals for protecting human health and the environment. Although the remedial action objectives were not specifically delineated in the RODs for OU 1 or OU 2, the following presumptive remedial action objectives for the activities conducted at the Site were developed in the1997 five-year review:

- Reduce exposure to contaminated soils at the site, specifically dioxin contamination.
- Reduce contamination of on-site groundwater by addressing contaminated soils.
- Reduce exposure to materials and equipment contaminated with dioxin.
- Reduce exposure to dioxin in fish in the Spring River.
- Assess the groundwater contamination to assure protectiveness.

B. Remedy Selection

In May 1988, EPA issued a ROD for OU1 that selected a remedial action for clean up of contaminated soils and equipment at the facility, and associated groundwater monitoring. Pursuant to the 1983 administrative order, EPA, MDNR, and Syntex developed an Implementation Plan to achieve the clean-up measures specified in the ROD for OU1.

The selected remedy under OU1 provided protection to the environment by preventing the mobilization of dioxin-contaminated soils to the Spring River. Protection to human health was to be accomplished by preventing exposure to contaminated materials through soil removal, decontamination and disposal of equipment, and capping of contaminated areas. Dioxin-contaminated soils in excess of a 20 ppb action level were to be excavated and transported for off-site treatment and disposal.

C. Remedy Implementation

Contaminated Soils and Equipment

Clean-up measures began in June 1988 with the excavation of dioxin-contaminated soils at four former storage areas within the Spring River flood plain. The four areas included the Burn area, the Irrigation area, the Lagoon area and the Slough area. Approximately 860 cubic yards of dioxin-contaminated soils were transported to the EPA Mobile Incineration System and thermally treated. The excavated areas were then backfilled with clean topsoil and a vegetative cover was established. Remediation of these contaminated soils was completed in 1989.

Dioxin-contaminated soils located in the trench area on bluffs west of the Spring River were capped in place with a 12-inch topsoil layer which supports a vegetative cover. In addition, a gravel drainage interception trench was installed upgradient from the trench area to restrict contaminant migration. Five groundwater monitoring wells were installed around the trench area for post-soil remediation groundwater monitoring. The monitoring well configuration consists of an upgradient well (MW-11), two downgradient wells (MW-17, MW-18), and two flanking downgradient wells (MW-12, MW-13). Wells MW-17 and MW-18 were completed in bedrock and screened across the alluvium/bedrock contact. The activities associated with the trench area were also completed in 1989. In 1996, additional work was initiated to replace several wells around the trench area as well as install wells in order to collect additional data for the groundwater around the trench area. Wells MW-12, MW-13, and MW-17 were replaced with closely located similar wells. Well MW-18 was modified and two new wells were installed. Well MW-19 was installed as a new downgradient well, and well MW-20 was installed as a new upgradient well. There are now six wells surrounding the trench area (MW-11, MW-12, MW-13, MW-17, MW-18, MW-19, and MW-20).

In 1995, all equipment and debris were removed from the spill area and the area was covered with an asphalt cap. No excavation was required in this area because the concentration of dioxin contamination was below the 20 ppb action level. The original plan called for a vegetative cap, but the owner wished to use the area for parking and movement of vehicles and equipment so an asphaltic cap was substituted. The EPA and the state agreed that this cap would be as protective as a vegetative cap. The cap will be maintained in perpetuity.

Decontamination procedures were developed to clean the contaminated NEPACCO and photolysis equipment. The procedures were implemented and approximately 75 percent of the equipment was treated. The land disposal restrictions posed problems for final management of the treated equipment. In 1996, a determination was made by EPA, under the hazardous debris rule, that the developed procedures would adequately protect human health and the environment and allow the treated equipment to be disposed as a solid waste. All of the equipment have since been properly treated and disposed.

Additional measures have been implemented beyond the selected remedy that provide further protection of human health and the environment. An eight-foot chain-link fence was erected around the perimeter of the site to limit access. In 1986, the state of Missouri implemented institutional controls on the site limiting changes in land use by placing the site on the State Registry of Confirmed Abandoned or Uncontrolled Hazardous Waste Disposal Sites in Missouri. The site is currently classified on the Registry as a Class "3" site. Class 3 sites are sites that do not present a significant threat to public health or the environment where action may be deferred. Missouri Code section 260.465 describes the authority of the MDNR with respect to use and transfer of sites on the Registry of Confirmed Abandoned or Uncontrolled Hazardous Waste Disposal Sites. In summary, a person shall not substantially change the manner in which a Registry site is used without written approval of the Director of the MDNR. The deed for the Site includes a notice that the property appears on the state registry. A covenant restricting the land use to industrial was filed in the Office of the Recorder of Deeds for Lawrence County, Missouri on September 3, 1996. This restrictive covenant is described in Paragraph 28 of Exhibit B attached to the General Warranty Deed for this property

Groundwater

In accordance with the Implementation Plan prepared pursuant to the 1983 consent order, ten groundwater monitoring wells were completed into the alluvium at the Site beginning in August 1985. Several organic compounds were tentatively identified in shallow groundwater at the Site. The OU1 ROD issued May 5, 1988, concluded that groundwater data generated from the initial ten monitoring wells were insufficient to determine groundwater monitoring needs at that time. The ROD required further monitoring to determine the nature and extent of potential groundwater contamination at the Site.

Subsequent to the 1988 OU1 ROD, the Verona OU2 Implementation Plan was developed to define additional groundwater monitoring characterization needs. Beginning in September, 1989, eleven additional groundwater monitoring wells were installed to provide the required post-remediation monitoring. The resulting 21-well network has been used to determine the flow characteristics of groundwater at the site and to more accurately define the extent of low-level organic and inorganic constituents in the groundwater at the Site.

Groundwater monitoring between January 1991 and April 1992 detected the presence of three compounds above Maximum Contaminant Levels (MCLs) including dichloromethane, 1,1-dichloroethane, and toluene. In addition, acetone and chlorobenzene were detected, for which there were no MCLs available at that time. Nine inorganic constituents were identified above MCLs including arsenic, barium, cadmium, chromium, lead, selenium, antimony, nitrate, and fluoride. Three additional inorganic constituents, iron, chlorides, and manganese were detected above secondary MCLs. The MCLs are standards utilized by municipal water supplies and are referenced for comparison purposes. The MCLs do not constitute Applicable or Relevant and Appropriate Requirements (ARARs) for this site.

A baseline risk assessment using assumptions about maximum exposures that could reasonably be expected for an individual at or near the Site was prepared by EPA on the basis of data generated from 1991 through 1992. The baseline risk assessment concluded that the risks posed by contaminants detected in groundwater from the site were within the acceptable risk range at that time.

In May 1993, EPA issued a ROD for OU2 at the Site addressing groundwater conditions. The ROD concluded that metals and organic contamination was present at various times, and noted that dioxin had been reported at a concentration of 5.3 parts per trillion (ppt) in a single sample. The ROD concluded that groundwater leaving the site would discharge into the Spring River, and that volatilization and biodegradation would remove some constituents before reaching the river. The ROD recognized that three private residential wells located downgradient of the site were sampled and no contamination was detected.

The remedy selected in the 1993 OU2 ROD was "no action with continued groundwater monitoring." The ROD required preparation of a risk assessment at the conclusion of a two-year groundwater monitoring program to assure that the "no action approach remains protective of human health and the environment." The ROD also required installation of additional upgradient and downgradient monitoring wells.

To follow up on requirements in the 1993 OU2 ROD, additional wells were installed (one upgradient and two near the downgradient perimeter of the site) and two years of additional sampling, from fall 1997 to fall 1999, were completed. Results from this sampling were used in a draft risk assessment completed in February 2000. The risk assessment concluded that risks associated with groundwater were within an acceptable range due to lack of complete exposure pathways. However, the ROD did not include institutional controls to restrict groundwater use.

D. Operation and Maintenance

All covered areas are maintained by the current site owner, BCP Ingredients, with the exception of the trench area, which is maintained by Syntex. Vegetation is maintained through routine visual inspections and repair as necessary. Shallow groundwater in the area contributes to the sustainability of dense vegetation. Maintenance requirements for asphalt caps similarly involve routine visual inspection and repair as necessary. All cover systems are currently inspected at least quarterly. Inspections and maintenance records, dating from the second five-year review to the present, were provided by BCP Ingredients. These records demonstrate the capped areas are inspected at the required frequency and repairs are made as needed. The inspection during the

third five-year review found all of the capped areas to be in very good condition, demonstrating effectiveness of the inspection and maintenance program. In addition, because the site in on the "Registry of Confirmed Abandoned or Uncontrolled Hazardous Waste Disposal Site in Missouri, the covers are inspected annually by MDNR personnel.

5. Progress since the Last Review

OU1 Soils

The 2002 Five-Year Review did not identify any issues or recommendations associated with the OU1 Soils Remediation portion of the project. Frequent cap inspections continue to take place and repairs are made as needed to the vegetative and asphalt capped areas. The good condition of the capped areas, observed during the five-year review site inspection in June 2007, demonstrates the effectiveness of the ongoing inspections and maintenance activities.

OU2 Groundwater

No issues were identified in the 2002 five-year review associated with the OU2 groundwater, however, there were two recommendations:

- Coordinate with state of Missouri and Syntex for finalizing risk assessment.
- Design and implement future groundwater monitoring program

In accordance with the 1993 ROD for OU2, groundwater monitoring was performed during eight quarterly sampling events from November 1997 to August 1999. Samples were analyzed for select volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), pesticides, dioxins, metals, and other inorganics. The identified chemicals of concern detected in the groundwater monitoring program included dioxin, barium, bis(2-ethylhexyl) phthalate, cadmium, chlorobenzene, chromium, and manganese.

A draft risk assessment was prepared and submitted to EPA in February 2000 to characterize risks associated with exposure to hazardous constituents detected in the 1997-1999 groundwater monitoring program. After finalizing the risk assessment, an ongoing groundwater monitoring program is to be developed. The efforts associated with finalizing the risk assessment and development of the ongoing monitoring program are not yet complete. In the interim, Syntex has continued sampling select monitoring wells on the main plant site and in the trench area on

an annual basis since the 2002 five-year review. Results from this monitoring were provided for review as part of the current five-year review.

6. Five-Year Review Process

A. Administrative Process

The five-year review process was conducted by the U.S. Army Corps of Engineers, Paul Speckin in support of the Remedial Project Manager (RPM) for the site, Robert Feild. Contact was made with Evan Kifer representing the MDNR; Sandra Potter of the Forrester Group, representing Syntex; and Terry Anderson, representing BCP Ingredients. Arrangements were made for a Site visit held on June 7, 2007.

B. Community Involvement

In May 2007, a fact sheet was prepared by EPA announcing the initiation of the five-year review process and mailed to 56 individuals appearing on the mailing list for the Site. Prior to the Site inspection, the Verona City Hall was visited to check on the status of Administrative Record for the Syntex site. The administrative record could not be located, which could have been the result of an ongoing transition of City Hall to a new building. The Administrative Record is also available at the EPA Records Center in Kansas City, Kansas.

Public notices announcing the five-year review process were advertised in several local newspapers. On April 25, 2007, notices appeared in the Monette Times and the Lawrence County Record. On April 27, 2007, a notice appeared in the Aurora Advertiser. Copies of both the fact sheet and public notice are included in Attachment F.

No comments were received from the public during the five-year review process.

C. Document Review

This five-year review consisted of a review of relevant documents including RODs, Administrative Orders, Implementation Plans, the Remedial Action Report, the second Five-Year Review Report, the Preliminary Close-Out Report, and the draft Groundwater Risk

Assessment Report for the site. Relevant documents reviewed during the current five-year review are listed in Attachment E of this report.

D. Data Review

OU1 Soils

The historic remedy at the plant site for dioxin-contaminated soils involved excavation and removal of surface soils exceeding 20 ppb 2,3,7,8-TCDD. Dioxin is extremely stable and persistent, and no substantial change in site concentrations is envisioned. No additional soil sampling data have been generated since sampling confirmed that residual site concentrations are less than 20 ppb. Additional soil sampling is not warranted to confirm the continued effectiveness of the remedy, provided adequate institutional controls remain in place.

Dioxin exceeding 20 ppb remained in the trench area in addition to buried drums of unknown contents. Measures were taken, including installation of a clay soil and vegetative cover and upgradient diversion trench to reduce the opportunity for contaminant migration. To monitor the effectiveness of the remedy in the trench area, groundwater monitoring wells were installed surrounding the trench (MW-11, MW-17, MW-18 and MW-20-upgradient). These wells were sampled annually since the last five-year review in 2002 and the results were provided and reviewed as part of the current five-year review. There were scattered detections of acetone, bis (2-ethylhexyl) phthalate, methylene chloride, 1,4-dioxane, 1,4-dichlorobenzene, ethylbenzene, toluene, and dioxin (note the first three listed are common laboratory contaminants); none exceeded chemical-specific federal maximum contaminant levels (MCLs) used for comparison. Some detections were above EPA Region 9 Preliminary Remediation Goals (PRGs), but not in the farthest downgradient well (MW18). No dioxin had been detected in any of the wells until 2003, the year the detection level was lowered to 2 part per quadrillion (ppq). The highest detection of dioxin was in well MW-17 in 2004 at a level of 15 ppq. This level dropped to an estimated value of 3.3 ppq in August 2006.

In addition to monitoring well data for the trench area, inspection and maintenance checklists for the capped areas were provided and reviewed as part of the current five-year review. The reports consist of a checklist for each individual area and notations were made of any maintenance activities performed. Instructions on the report call for quarterly inspection, however inspections occurred on a more frequent basis.

OU2 Groundwater

Syntex has continued to monitor a select number of wells from their monitoring well network on the plant site, although a final monitoring plan is not in place. This data was provided and evaluated as part of the current five-year review. Wells monitored include IS-6 (upgradient), MW-6, MW-15A, and MW-21. Dioxin was detected at a low level, near the method detection limit in one on-site well (MW-6), but it was not detected in the downgradient perimeter well (MW-21). Of the detections seen in MW-21, only manganese concentrations were above the PRGs, used for risk-based screening; however, manganese in this and in the upgradient well was coded as a qualified result because it was also found in quality control samples

Monitoring well data reviewed as part of the current five-year review as well as sample inspection checklists are provided in Attachment B.

E. Site Inspection

A Site inspection was performed on June 7, 2007. Photographs from the inspection are provided in Attachment C and a site inspection checklist is provided in Attachment D. The purpose of the visit was to perform an inspection in order to complete the five-year review process. Participating in the inspection were Paul Speckin, USACE, Mr. Evan Kifer, Site Manager for MDNR, Ms. Sandra Potter of the Forrester Group representing Syntex, and Mr. Terry Anderson, representing the current site owner, BCP Ingredients.

Access to the property is controlled by an eight-foot chain-link fence. Entrance to the site is controlled by security gate. After visitors are allowed access to the property, they are required to sign in at the office and are required to have an escort while on plant property.

Areas inspected included the asphalt cover in the spill area and T-1 dike area. Painted yellow lines provided demarcation of each capped area. Overall the asphalt caps were in very good condition. There was one location in the T-1 dike area with some minor cracking along a previously sealed area. Since the objective of the cap is to prevent dermal contact and erosion of the underlying soil, this is not a significant issue. However, some additional asphalt sealant in this area would help prevent the progression of this crack.

Vegetative covers in the Lagoon area, Irrigation area, Burn area, Slough area, and Trench area were also inspected. The vegetative covers were all in very good condition. Each area was demarcated with a single cable fence with warning sign hanging at frequent intervals along the fence. Thick vegetation was exhibited in all areas and no erosion or signs of distress were observed.

F. Interviews

Interviews were conducted during the Site Inspection. Representatives from Syntex and BCP Ingredients answered questions during the site inspection. Any substantive issues identified during the interviews and site inspection are included in the site inspection checklist (Attachment D) and are discussed in Section 7 of this report.

7. Technical Assessment

Question A: Is the remedy functioning as intended by the decision documents?

OU1 Soil - YES

Remedial Action Performance:
The review of site documents and the results of the site inspection indicate that the remedy is continuing to function as intended.

The OU1 ROD called for excavation and off-site management of soils with dioxin levels above 20 parts per billion, and capping those soil areas with dioxin levels above 1 ppb. These remedial actions achieved the objectives of controlling direct contact exposure pathways and minimizing the potential for off-site migration of contaminants by fugitive dust generation, surficial erosion,

or migration to groundwater. Capped areas are routinely inspected by BCP Ingredients personnel and repairs are made as needed. All asphalt and vegetative caps were inspected during the five-year review site visit and found to be intact and in good condition.

Trench well data from 2000 to 2006 indicate that the monitoring well network is functioning as intended. Spatially and temporally, there were scattered detections of organics (acetone, bis (2-ethylhexyl) phthalate, methylene chloride, 1,4-dioxane, 1,4-dichlorobenzene, ethylene benzene, toluene, and dioxin – note the first three listed are common laboratory contaminants); none exceeded chemical-specific federal or state MCLs used for comparison. Some detections were above PRGs, but not in the farthest downgradient well (MW18). Dioxin was detected in MW17 at a maximum concentration of 15 parts per quadrillion (ppq) in August 2004, but dropped to 3.3 ppq, which is near the detection limit, in August 2006. Trench water is not a source of potable water and therefore there is no risk of exposure. Based on the results of the furthest downgradient well, no contamination above a level of concern is leaving the area.

Opportunities for Optimization:

No opportunities were identified to reduce the ongoing operation and maintenance requirements associated with the cap inspections and maintenance.

Implementation of Institutional Controls and Other Measures:

Access controls, which provide further protection of human health, are being maintained. An eight-foot chain link fence surrounds the site. A security gate controls access to the property. Each capped area is identified with clear demarcation and warning signs. For vegetated caps, these consist of a cable strung between fence posts and warning signs. For the asphalt caps, this consists of painted yellow lines identifying the capped area.

The implementation plan for OU1 included a land-use restriction. The deed notice filed with Lawrence County was modified in 2002 to reflect property ownership records. Dividing the Site into Syntex-Verona East (BCP Ingredients, Inc.) and Syntex-Verona West (Syntex Agribusiness, Inc.), both deed notices restrict land use to industrial and identify the Site as being on the Missouri Registry of Confirmed Abandoned or Uncontrolled Hazardous Waste Disposal Sites.

The deed restrictions and appearance on the State Hazardous Waste Registry assures that land use will remain consistent with the implemented remedy. However, it is not certain if the restrictive covenant in the deed is adequately restrictive to prevent inappropriate land use.

Early Indicators of Potential Issues:

Trench Area Well Monitoring and Reporting Requirements:

The remedy for the trench area left dioxin in place greater than 20 ppb as well as buried drums of unknown contents. The decision was made to leave these contaminants in place due to concern for potential migration of contaminants if excavation activities disrupted the low permeability layers beneath the site. The remedy for the trench area also included installation of groundwater monitoring wells around the trench. Syntex continues to collect and analyze samples from these wells on an annual basis. Results from annual sampling dating from August 2000 to August 2006 were provided for evaluation during the current five-year review. The results indicate the remedy in the trench area continues to be effective and remains protective. However, a current monitoring plan defining the frequency of sampling and reporting requirements has not been developed. It is recommended the current monitoring and reporting requirements for the trench area wells should be evaluated to determine if they are sufficient to ensure the long-term protectiveness of the remedy.

OU2 Groundwater – YES

Remedial Action Performance:

The OU2 ROD required two-year groundwater and surface water monitoring, followed by a reassessment of potential risk; this has been completed. The re-assessment was submitted to the EPA in 2000 and was based on the data collected from 1997 through 1999. In 2006, a report with additional groundwater data from 2003 through 2005 was submitted to the EPA to support conclusions drawn in the 2000 re-assessment. The 2000 risk reassessment has not yet been finalized.

The 2003-2006 data support the conclusion that the remedy remains protective. Dioxin was detected at a low level near the method detection limit, in one on-site well, but it was not detected in the downgradient perimeter well (MW21). Of the detections seen in MW21, only

manganese concentrations were above the PRGs, used for risk-based screening. However, manganese detections in this and in the upgradient well were qualified because manganese was also found in quality control samples. Exposure is not occurring and not expected to occur in the short-term, since there are no potable wells placed in the impacted area and none immediately downgradient of the site. There are no institutional controls currently in place restricting use of groundwater.

Surface water data collected from 1997 through 1999 (the last sampling events) support the protectiveness of the remedy. Three organic chemicals were detected in surface water samples, and only one exceeded federal or state water quality criteria; this was methylene chloride, detected in 1 of 8 samples. Both methylene chloride and bis[(2-ethylhexyl)phthalate] are considered common laboratory contaminants. Phenol was the third organic detected, but was at a level well below criteria. One inorganic, manganese, was slightly above the state surface water criteria set to protect groundwater, but the average concentration of manganese from all samples was below this criterion.

Opportunities for Optimization:

It is recommended that opportunities for optimization be considered as the OU2 groundwater risk assessment is finalized and a long-term monitoring plan is developed.

Implementation of Institutional Controls and Other Measures:

There were no institutional controls identified for groundwater as part of the OU2 ROD. It is recommended the need for institutional controls be evaluated to prevent future exposure to contaminated groundwater and assure long-term protectiveness of the Site.

Early Indicators of Potential Issues:

The 2000 draft risk assessment for the OU2 groundwater has not been finalized. Monitoring of a select number of wells demonstrates the remedy is currently protective. However, the draft risk assessment will need to be finalized, with consideration given to the 2006 report supplement, so that long-term monitoring plans can be developed to ensure future protectiveness.

Question B: Are the exposure assumptions, toxicity data, clean-up levels, and remedial action objectives used at the time of remedy selection still valid?

YES.

There have been no changes in the physical conditions of the site that would affect the protectiveness of the remedy.

Changes in Exposure Pathways:

The exposure assumptions at the time of the OU1 soil remedy remain valid in the short-term. High levels of dioxin in soil were removed from the Site, and dioxin above 1 ppb in soil was capped, which eliminated direct contact exposures for humans and most ecological receptors. Exposure assumptions made for the OU2 groundwater risk assessment were conservative and remain protective today. While the baseline risk re-assessment evaluated hypothetical on-site and off-site receptors exposed to contaminated groundwater, these pathways currently remain incomplete. The restrictive covenant and appearance on the State registry provide assurances that on-site land use will not change in the future; however, it is uncertain if these restrictions should be considered adequate to prevent inappropriate land use from occurring that could result in non-protective exposures. In addition, there are no institutional controls in place restricting groundwater use. Although the Site is currently protective with respect to groundwater due to lack of complete exposure pathways, the need for institutional controls restricting future groundwater use should be evaluated. Potential risk from surface water exposures while swimming were characterized as insignificant. The risk reassessment also determined that potential risks to indoor workers from inhalation of chlorobenzene vapors were insignificant.

In removing areas of soil with the highest levels of dioxin and then capping the remaining areas that were above 1 ppb, the OU1 remedy served to substantially reduce the sources in soil that may leach to groundwater in the future. Dioxin chemical/physical properties indicate that it is of low mobility, further supporting the unlikelihood of future detections in groundwater as a result of migration from residual contamination in soil.

Changes in Toxicity, and Other Contaminant Characteristics:

In 2004, the draft dioxin toxicity reassessment for dioxin prepared by EPA was presented to the National Research Council (NRC) of the National Acadamies for review. The 2006 NRC recommendations for re-estimating risks, more clearly communicating uncertainties, and better explaining data that formed the basis for the reassessment will require substantial revisions before a final consensus on dioxin toxicity can be reached. In the interim, the Office of Solid Waste and Emergency Response (OSWER) Directive 9200.4-26 remain the Agency's recommendations for dioxin contaminated sites.

OU1 ROD specified a 20 ppb cleanup level for dioxin in soil, in accordance with the OSWER Directive 9200.4-26 recommendation for commercial/industrial settings. Soils above this level were removed and managed off site. This level also met recommendations from the Agency for Toxic Substances and Disease Registry (ATSDR) and the Missouri Department of Health and Senior Services (MDHSS). A level of 1 ppb was identified in the OU1 ROD as the level of dioxin requiring a vegetative cap. This level was recognized in the Directive as an appropriate cleanup level for residential settings. Therefore, the remedy for soil remains protective.

Changes in Standards and To Be Considered (TBCs):

Potential ARARs identified in the OU1 ROD were as follows:

- Resource Conservation and Recovery Act
- Missouri Hazardous Waste Management Law
- Federal and State Water Quality Criteria
- Federal, State, and County Transportation Requirements
- State and County Air Pollution Control Requirements
- State and County Solid Waste Disposal Regulations

Most of these listed are action and/or location specific and related to the actual excavation, transport, and off-site handling of contaminated soils, which has been completed. None of these potential ARARs are chemical-specific for contaminants in soil, although federal and state water quality criteria were specified as applicable to surface water.

The OU2 ROD did not identify ARARs. Federal MCLs, which are standards utilized by municipal water supplies for safe drinking water, were noted in the ROD for comparison purposes.

While some chemical-specific surface water and groundwater standards identified as potentially applicable to the site may have changed, the selected remedy remains valid as evidenced by the comparison of data presented under Question A. References for TBCs used for comparison are found in Attachment E.

Expected Progress Towards RAOs:

Presumptive remedial action objectives developed during the 1997 five-year review process for the Site remain valid for the OU1 soils remedy. There are no newly identified contaminants, contaminant sources, or human health or ecological routes of exposure that could affect the protectiveness of the OU1 remedy. There are no toxic byproducts of the remedy. There have been no changes to standards identified in the site RODs or newly promulgated standards that would call into question the protectiveness of the remedy. While the EPA dioxin toxicity assessment is ongoing, recommended toxicity factors or other contaminant characteristics have not changed. It is uncertain if the current institutional controls restricting land use are adequate to provide necessary assurance that inappropriate future land use will not occur.

The remedial action objective for OU2 was to assess the protectiveness of groundwater. All actions necessary to accomplish this have not been completed. The 2000 draft risk assessment should be finalized and a long-term monitoring plan developed and implemented. In addition, the need for institutional controls restricting groundwater use should be evaluated.

Question C: Has any other information come to light that could call into question the protectiveness of the remedy?

NO

No other information has been identified that would call into question the protectiveness of the remedy. The site-specific assessment of groundwater conditions continues to demonstrate protection of human health and the environment. There are no newly identified ecological risks, and there are no impacts from natural disasters.

While a formal ecological risk assessment was not conducted for the site, information provided in historical documents indicate that conclusions about incompleteness of pathways were drawn in a manner consistent with current EPA guidelines and therefore remain valid.

Since the late 1980s, EPA has been working on a reassessment of the risks associated with exposure to dioxin. This reassessment has involved peer review inside and outside the Agency. Although the current draft EPA dioxin reassessment suggests that some assumptions in the science of dioxin-risk assessment could change, it is unclear whether, and to what extent, these changes will ultimately impact Superfund clean-up levels. It remains EPA policy to remediate dioxin-contaminated sites in the Superfund program in accordance with OSWER directive 9200.4-26. The dioxin clean up performed at the Site remains consistent with that OSWER directive.

Technical Assessment Summary

According to the data reviewed and the site inspection, the remedy is functioning as intended by the RODs. There have been no changes to the physical conditions of the Site that would affect the short-term protectiveness of the remedy. There has been no change to the standardized risk assessment methodology that could affect the protectiveness of the remedy. There have been no changes in land use or exposure opportunities that affect the short-term protectiveness of the remedy. However, it is recommended that the land use restrictions currently in place be re-evaluated to assure they are adequate to prevent future inappropriate land use that could result in non-protective exposure. Further, there are no institutional controls in place restricting groundwater use. It is recommended that the need for groundwater use restrictions be evaluated. Monitoring wells associated with the trench area continue to be monitored on an annual basis, however, it is recommended that monitoring and reporting requirements be re-evaluated to ensure long-term protectiveness of this area. In addition, the OU2 draft risk assessment should be finalized and an appropriate monitoring and reporting program be developed to ensure long-term protectiveness of the OU2 groundwater

8. Issues

There are no issues related to Site operations, conditions, or activities that prevent the remedy from being currently protective. However, it is recommended that the following issues be addressed to assure the continued protectiveness of the remedy.

Table 2: Issues

Issue	Description	Currently Affects Protectiveness (Y/N)	Affects Future Protectiveness (Y/N)
1	Trench Well Monitoring and Reporting Requirements	N	Y
2	Finalization of OU2 Draft Risk Assessment and Long Term Groundwater Monitoring Plan	N	Y
3	Adequacy of Institutional Controls to Prevent Inappropriate Land Use	N	Y
4	Lack of Institutional Controls Restricting Use of Groundwater	N	Y
5	Administrative Record Could Not Be Located at the Local Repository	N	N

9. Recommendations and Follow-up Actions

For the follow-up actions listed in Table 2, Syntex and EPA share responsibility for implementing recommended actions. EPA remains the lead oversight agency, and MDNR continues to be consulted and involved in site activities.

Table 3: Recommendations and Follow-up Actions

Issue	Recommendations/ Follow-Up Actions	Responsible Party	Oversight Agency	Milestone Date	Affects Protectiveness (Y/N)	
					Current	Future
1	Evaluation of Trench well monitoring and reporting requirements to ensure they are sufficient to maintain long-term protectiveness at the site.	Syntex	EPA	September 2008	N	Y
2	Finalize draft risk assessment for OU2 and establish long-term monitoring needs with appropriate plans developed, approved and implemented.	Syntex	EPA	September 2008	N	Y
3	Re-evaluate adequacy of current institutional controls to assure that inappropriate land use does not occur.	EPA	EPA	September 2008	N	Y
4	Evaluate the need for institutional controls restricting groundwater use	EPA	EPA	September 2008	N	Y
5	Locate Administrative Record at the Local Repository	EPA	EPA	April 2008	N	N

10. Protectiveness Statement

The remedy at the Site currently protects human health and the environment because all caps are intact and well maintained, institutional controls are in place limiting site use to industrial, and exposure pathways to groundwater are not complete. However, in order to assure continued protectiveness in the long-term, monitoring requirements for the trench area and facility should be established, the OU2 risk assessment should be finalized, adequacy of current land use restrictions should be re-evaluated, and the need for restrictions on groundwater use should be evaluated.

11. Next Review

The next five-year review for the Site is required by September 27, 2012, five years from the date of this review.

Attachment A

FIGURES

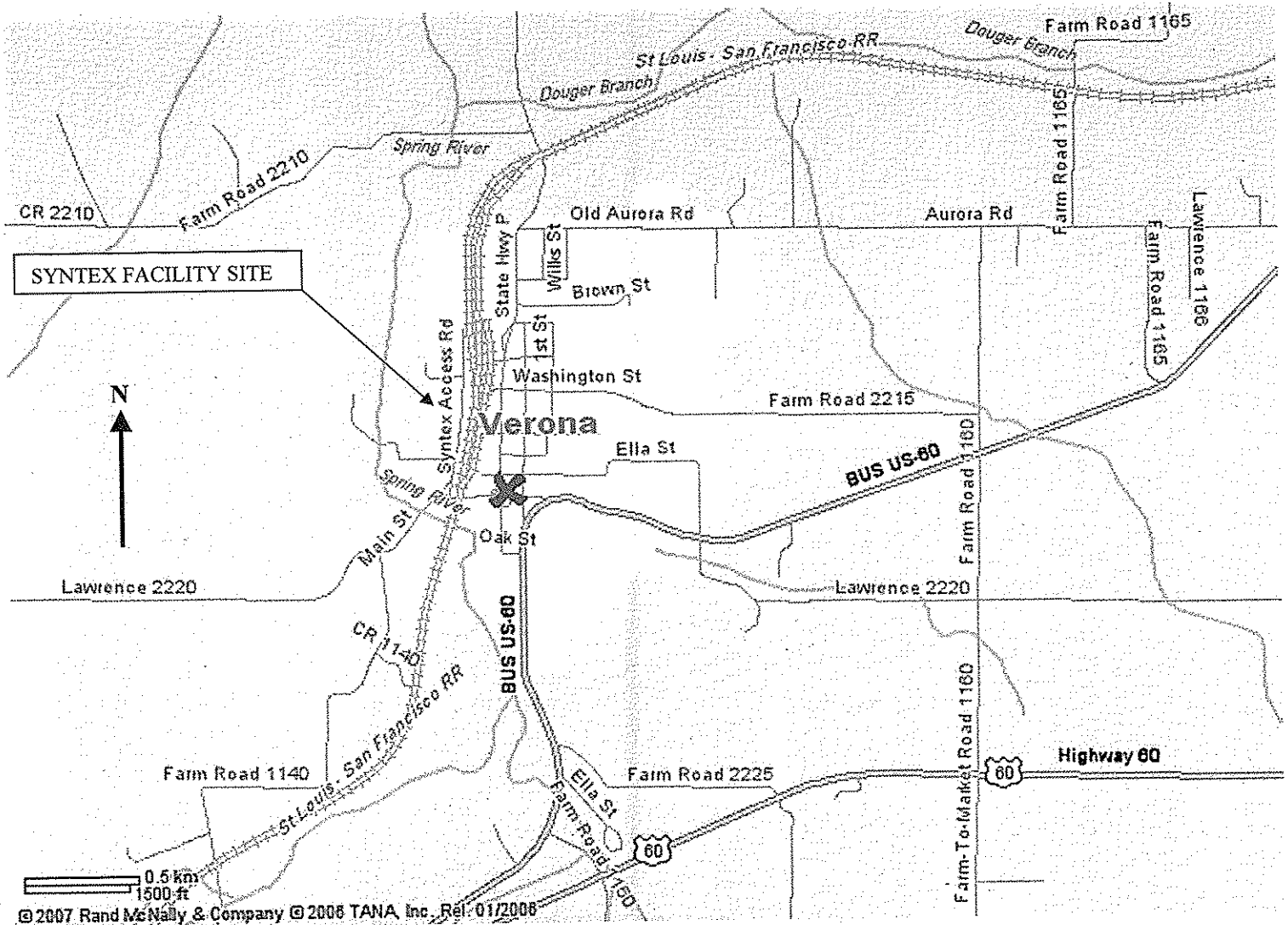
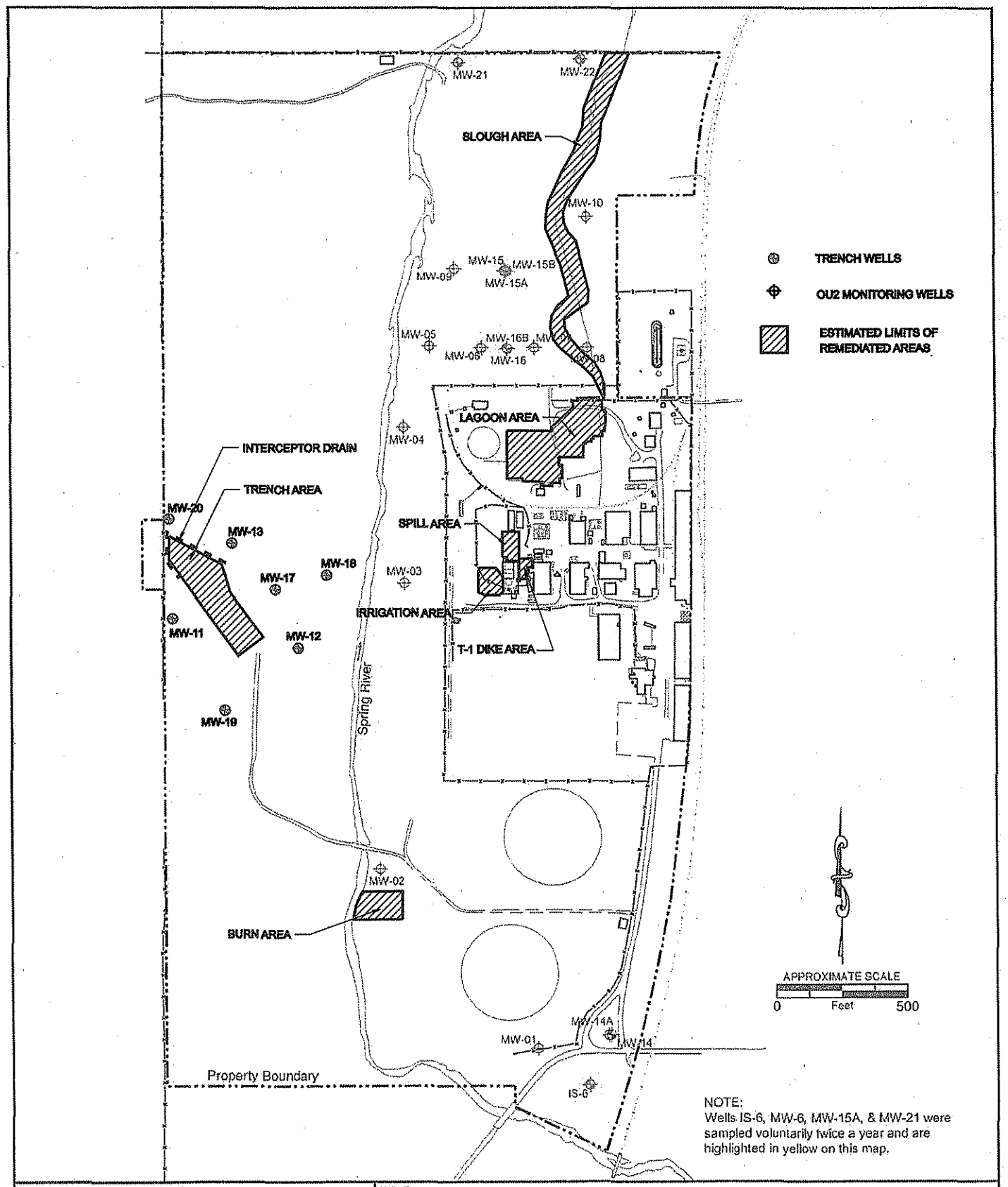


FIGURE 1: SITE LOCATION



THE FORRESTER GROUP

INSIGHTFUL ENVIRONMENTAL SOLUTIONS

MODIFIED JULY 2007 BY US ARMY CORPS OF ENGINEERS FOR THIRD FIVE YEAR REVIEW

TITLE:

FIGURE 2
THIRD FIVE YEAR REVIEW
SYNTEX FACILITY SITE
REMEDIATION AREAS AND WELL LOCATIONS
VERONA, MISSOURI

1239-02.DWG 03/06/2008

Attachment B

OU2 MONITORING DATA

TRENCH WELL MONITORING DATA

SAMPLE OF CAP INSPECTION FORMS

Syntex - Verona
Analytical Results
Data Compilation August 2003 - August 2006 Voluntary Sampling

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OU-2	IS-6								MW-6							
	Aug. 2003	Feb. 2004	Aug. 2004	Feb. 2005	July 2005	Aug. 2006	Voluntary Avg.	AOC avg.	Aug. 2003	Feb. 2004	Aug. 2004	Feb. 2005	July 2005	Aug. 2006	Voluntary Avg.	AOC avg.
VOCs: (ug/L)																
Acetone	nd	nd	nd	nd	nd	nd		*1.0 (1)*	nd	nd	nd	nd	nd	nd		*36.5 (2)*
Chlorobenzene	nd	nd	nd	nd	nd	nd			90	67	72	52	64	78	*70.5 (6)*	*199 (16)*
Methylene chloride	nd	nd	nd	nd	nd	nd		*4.0 (2)*	nd	nd	nd	nd	nd	nd		*13.3 (3)*
1,4-Dioxane	nd	nd	nd	nd	nd	nd			nd	nd	nd	nd	nd	nd		
Ethylbenzene	nd	nd	nd	nd	nd	nd			6.5	1.2J	5.9	1.6J	3J	nd	*3.8 (4)*	*6.3 (13)*
1,1,2,2-tetrachloroethane	nd	nd	nd	nd	nd	nd			nd	nd	nd	nd	nd	nd		
Tetrachloroethene	nd	nd	nd	nd	nd	nd			nd	nd	nd	nd	nd	nd		*5 (1)*
1,4-dichlorobenzene	nd	nd	nd	nd	nd	nd			14	8.6	16	13	12	5.8	*11.6 (6)*	*11.3 (10)*
Toluene	nd	nd	nd	nd	nd	0.97 JB	*0.97 (1)*		9.7	nd	19	19	39	0.65JB	*17.1 (6)*	*22.7 (11)*
Xylene (total)	nd	nd	nd	nd	nd	nd		*1.0 (1)*	59	16	61	8.5	29	8.7J	*30.4 (6)*	*40.4 (15)*
SVOCs: (ug/L)																
Bis (2-ethylhexyl)phthalate	25B	nd	nd	nd	nd	nd	*25(1)*	*11.0 (6)*	17B	nd	nd	nd	nd	nd	*17(1)*	*2.4 (8)*
1,3-dichlorobenzene	nd	nd	nd	nd	nd	nd			nd	nd	nd	nd	nd	1.1J	*1.1 (1)*	*1.4 (5)*
Hexachlorophene	nd	nd	nd	nd	nd	nd			nd	nd	nd	nd	nd	nd		
Naphthalene	nd	nd	nd	nd	nd	nd			nd	nd	nd	nd	nd	nd		*2.1 (4)*
1,2,4-trichlorobenzene	nd	nd	nd	nd	nd	nd			nd	nd	nd	nd	nd	nd		*0.5 (1)*
1,2,4,5-tetrachlorobenzene	nd	nd	nd	nd	nd	nd			nd	nd	nd	nd	nd	nd		
Dioxin: (pg/L)																
2,3,7,8-TCDD	nd	nd	nd	nd	nd	nd			nd	nd	nd	4.4	4.1Q,J	nd	*4.25(2)*	*140 (1)*
	Previous reporting limits (1997-1999) ranged from 0.03 - 0.6 ng/L; Voluntary method detection limits (2003-2005) ranged from 0.64 - 3.3 pg/L.															
Metals: (ug/L)																
Arsenic	265	nd	nd	2.9B	18.9	26.3	*78.3 (4)*	*67.6 (8)*	22.4	19.8	25.2	21.2	52.8	22.2	*27.5 (6)*	*28.0 (12)*
Barium	3380	114B	239	266	694	1170	*977.2 (6)*	*1,491 (8)*	576	596	538	499	661	705	*595.8 (6)*	*1,606 (12)*
Cadmium	1.9JB	nd	nd	nd	nd	nd	*1.9(1)*	*5.5 (4)*	nd	nd	nd	nd	nd	nd		*6.8 (7)*
Chromium	41.9	nd	nd	nd	27.4	14.9	*28.1 (3)*	*108 (8)*	1.2B	0.92	nd	nd	47.9	nd	*16.67 (3)*	*49 (11)*
Magnesium	4790B	2820B	3270B	2860B	3000B	2880B	*3270 (6)*	*7,120 (8)*	5460	6160	5860	6140	6650	8030	*6383.3 (6)*	*11,418 (12)*
Manganese	17300	81.9	2140N	825N	1760N	2370	*4079.5 (6)*	*7,909 (8)*	1120	1360	1140N	1230	1810	1730	*1398.3 (6)*	*10,896 (12)*

Highlighted rows denote analytes identified as "chemicals of concern" in the 2000 draft risk assessment
avg - Averages indicate average of *detected* values in previous voluntary sampling events. Numbers in parentheses indicate number of detections in data set.
AOC avg - Average of detected values during 8 quarters of AOC sampling.
J - Estimated result. Result is less than quantitation limit.
B - Method blank contamination. The associated method blank contains the analyte at a reportable level.
Q - Estimated maximum possible concentration.
N - Spiked analyte recovery was outside stated control limits.
nd - Analyte not detected

Syntex - Verona
Analytical Results
Data Compilation August 2003 - August 2006 Voluntary Sampling

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OU-2	MW-15A								MW-21							
	Aug. 2003	Feb. 2004	Aug. 2004	Feb. 2005	July 2005	Aug. 2006	Voluntary Avg.	AOC avg.	Aug. 2003	Feb. 2004	Aug. 2004	Feb. 2005	July 2005	Aug. 2006	Voluntary Avg.	AOC avg.
VOCs: (ug/L)																
Acetone	nd	nd	nd	nd	nd	nd			nd	3.9J	nd	nd	nd	nd	*3.9(1)*	
Chlorobenzene	nd	nd	nd	nd	nd	nd		*35(1)*	nd	nd	nd	nd	nd	nd		
Methylene chloride	nd	nd	nd	nd	nd	nd		*5.5 (2)*	nd	nd	3.2J	ndJ	nd	nd	*3.2(1)*	*4.0 (2)*
1,4-Dioxane	nd	nd	nd	63J	nd	nd	*63(1)*		nd	nd	nd	57J	nd	nd	*57(1)*	
Ethylbenzene	nd	nd	nd	nd	nd	nd			nd	nd	nd	nd	nd	nd		
1,1,2,2-tetrachloroethane	nd	nd	nd	nd	nd	nd			nd	nd	nd	nd	nd	nd		
Tetrachloroethene	nd	nd	nd	nd	nd	nd			nd	nd	nd	nd	nd	nd		
1,4-dichlorobenzene	nd	nd	0.66J	nd	nd	nd	*0.66(1)*		nd	nd	nd	nd	nd	nd		
Toluene	nd	nd	nd	nd	nd	0.8JB	*0.8(1)*		nd	nd	nd	nd	nd	1.2JB	*1.2(1)*	
Xylene (total)	nd	nd	nd	nd	nd	nd			nd	nd	nd	nd	nd	nd		
SVOCs: (ug/L)																
Bis (2-ethylhexyl)phthalate	6.3JB	nd	nd	nd	nd	nd	*6.3(1)*	*2.4 (6)*	13B	19	nd	nd	nd	nd	*16(2)*	*2.6 (4)*
1,3-dichlorobenzene	nd	nd	nd	nd	nd	nd			nd	nd	nd	nd	nd	nd		
Hexachlorophene	nd	nd	nd	nd	nd	nd			nd	nd	nd	nd	nd	nd		
Naphthalene	nd	nd	nd	nd	nd	nd			nd	nd	nd	nd	nd	nd		*4.0 (1)*
1,2,4-trichlorobenzene	nd	nd	nd	nd	nd	nd			nd	nd	nd	nd	nd	nd		
1,2,4,5-tetrachlorobenzene	nd	nd	nd	nd	nd	nd			nd	nd	nd	nd	nd	nd		
Dioxin: (pg/L)																
2,3,7,8-TCDD	nd	nd	nd	nd	nd	nd			nd	nd	nd	nd	nd	nd		
	Previous reporting limits (1997-1999) ranged from 0.03 - 0.6 ng/L; Voluntary method detection limits (2003-2005) ranged from 0.64 - 3.3 pg/L.															
Metals: (ug/L)																
Arsenic	7.2B	2.9B	5.3B	nd	9B	5.7B	*5.9 (5)*	*12.6 (8)*	nd	nd	nd	nd	nd	5.3B	*5.3 (1)*	*26.0 (6)*
Barium	664	518	620	557	554	724	*606.2 (6)*	*837 (8)*	158B	170B	210	187B	173B	296	*199 (6)*	*923 (8)*
Cadmium	0.53JB	nd	nd	nd	nd	nd	*0.5 (1)*		0.4JB	0.69B	0.63B	nd	nd	nd	*0.6 (3)*	*7.1 (6)*
Chromium	2.9B	1.9B	9B	nd	29.1	15.2	*11.6 (5)*	*39 (7)*	0.97B	1B	nd	nd	2.2B	31.5	*7.3 (5)*	*131 (8)*
Magnesium	7880	7690	8420	6590	9970	8070	*8103.3 (6)*	*7,994 (8)*	3040B	3180B	3210B	3130B	3150B	4120B	*3305 (6)*	*9,595 (8)*
Manganese	6240	3160	4650N	2130	4670	3800	*4108.3 (6)*	*7,264 (8)*	1100	1050	2350N	1800	1940	3880	*2020 (6)*	*9,055 (8)*

Highlighted rows denote analytes identified as "chemicals of concern" in the 2000 draft risk assessment
avg - Averages indicate average of *detected* values in previous voluntary sampling events. Numbers in parentheses indicate number of detections in data set.
AOC avg - Average of detected values during 8 quarters of AOC sampling.
J - Estimated result. Result is less than quantitation limit.
B - Method blank contamination. The associated method blank contains the analyte at a reportable level.
Q - Estimated maximum possible concentration.
N - Spiked analyte recovery was outside stated control limits.
nd - Analyte not detected

Trench Wells Sampling Results
Annual sampling conducted in August 2000

Well	MW-11	MW-17	MW-18	MW-20	Trip Blank
VOCs:					
Acetone	ND	**11**	ND	**5**	ND
Chlorobenzene	ND	**48**	ND	ND	ND
Methylene chloride	ND	ND	ND	ND	ND
1,4-Dioxane	ND	ND	ND	ND	ND
Ethylbenzene	ND	ND	ND	ND	ND
1,1,2,2-tetrachloroethane	ND	ND	ND	ND	ND
Tetrachloroethene	ND	ND	ND	ND	ND
1,4-dichlorobenzene	ND	**8**	ND	ND	ND
Toluene	ND	ND	ND	ND	ND
Xylene (total)	ND	ND	ND	ND	ND
SVOCs:					
Bis (2-ethylhexyl)phthalate	ND	**68**	ND	**26**	NA
1,3-dichlorobenzene	ND	ND	ND	ND	NA
Hexachlorophene	ND	ND	ND	ND	NA
Naphthalene	ND	ND	ND	ND	NA
1,2,4-trichlorobenzene	ND	ND	ND	ND	NA
1,2,4,5-tetrachlorobenzene	ND	ND	ND	ND	NA
Dioxin:					
2,3,7,8-TCDD	ND	ND	ND	ND	NA

Notes:
VOC and SVOC results in ug/l (ppb)
2,3,7,8-TCDD results in ng/l (ppt) (Detection limit 0.10 to 0.14 ng/l)
ND = not detected above quantitation limit
NA = not analyzed
Please note that OU-1 wells MW-12, MW-13, and MW-19 were not sampled
Laboratory = Southwest Laboratory of Oklahoma, Inc.

Trench Wells Sampling Results
Annual sampling conducted in July 2001

Well	MW-11	MW-17	MW-18	MW-20	Trip Blank
VOCs:					
Acetone	ND	ND	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND	ND
Methylene chloride	ND	ND	ND	ND	**2 J**
1,4-Dioxane	ND	ND	ND	ND	ND
Ethylbenzene	ND	ND	ND	ND	ND
1,1,2,2-tetrachloroethane	ND	ND	ND	ND	ND
Tetrachloroethene	ND	ND	ND	ND	ND
1,4-dichlorobenzene	ND	**5**	ND	ND	ND
Toluene	ND	ND	ND	ND	ND
Xylene (total)	ND	ND	ND	ND	ND
SVOCs:					
Bis (2-ethylhexyl)phthalate	ND	ND	ND	ND	NA
1,3-dichlorobenzene	ND	ND	ND	ND	NA
Hexachlorophene	ND	ND	ND	ND	NA
Naphthalene	ND	ND	ND	ND	NA
1,2,4-trichlorobenzene	ND	ND	ND	ND	NA
1,2,4,5-tetrachlorobenzene	ND	ND	ND	ND	NA
Dioxin:					
2,3,7,8-TCDD	ND	ND	ND	ND	NA

Notes:
VOC and SVOC results in ug/l (ppb)
2,3,7,8-TCDD results in ng/l (ppt) (Sample specific estimated detection limits (EDL) ranged from 0.010 to 0.018 ng/l)
ND = not detected
NA = not analyzed
J = Estimated value: concentration is below limit of quantitation
Please note that OU-1 wells MW-12, MW-13, and MW-19 were not sampled
Please note that 1,4-dichlorobenzene in MW-17 was found at the limit of detection.
Laboratory = Southwest Laboratory of Oklahoma, Inc.

Trench Wells Sampling Results
Annual sampling conducted in August 2002

Well	MW-11	MW-17	MW-18	MW-20	Trip Blank
VOCs:					
Acetone	ND	ND	ND	ND	ND
Chlorobenzene	ND	**52**	ND	ND	ND
Methylene chloride	ND	ND	ND	ND	ND
1,4-Dioxane	ND	ND	ND	ND	ND
Ethylbenzene	ND	ND	ND	ND	ND
1,1,2,2-tetrachloroethane	ND	ND	ND	ND	ND
Tetrachloroethene	ND	ND	ND	ND	ND
1,4-dichlorobenzene	ND	**8**	ND	ND	ND
Toluene	ND	ND	ND	ND	ND
Xylene (total)	ND	ND	ND	ND	ND
SVOCs:					
Bis (2-ethylhexyl)phthalate	**11**	ND	ND	ND	NA
1,3-dichlorobenzene	ND	ND	ND	ND	NA
Hexachlorophene	ND	ND	ND	ND	NA
Naphthalene	ND	ND	ND	ND	NA
1,2,4-trichlorobenzene	ND	ND	ND	ND	NA
1,2,4,5-tetrachlorobenzene	ND	ND	ND	ND	NA
Dioxin:					
2,3,7,8-TCDD	ND	ND	ND	ND	NA

Notes:
VOC and SVOC results in ug/l (ppb)
2,3,7,8-TCDD results in ng/l (ppt) (Sample specific estimated detection limits (EDL) ranged from 0.010 to 0.018 ng/l)
ND = not detected
NA = not analyzed
J = Estimated value: concentration is below limit of quantitation
Please note that OU-1 wells MW-12, MW-13, and MW-19 were not sampled
Laboratory = Southwest Laboratory of Oklahoma, Inc.

Trench Wells Sampling Results
Annual sampling conducted in August 2003

Well	MW-11	MW-17	MW-18	MW-20	Trip Blank
VOCs:					
Acetone	**5.9 JB**	ND	ND	ND	**7.0JB**
Chlorobenzene	ND	**58**	ND	ND	ND
Methylene chloride	ND	ND	ND	ND	ND
1,4-Dioxane	ND	ND	ND	ND	ND
Ethylbenzene	ND	ND	ND	ND	ND
1,1,2,2-tetrachloroethane	ND	ND	ND	ND	ND
Tetrachloroethene	ND	ND	ND	ND	ND
1,4-dichlorobenzene	ND	**6.8**	ND	ND	ND
Toluene	ND	ND	ND	ND	ND
Xylene (total)	ND	ND	ND	ND	ND
SVOCs:					
Bis (2-ethylhexyl)phthalate	**12B**	**40**	**34B**	**7.2JB**	NA
1,3-dichlorobenzene	ND	ND	ND	ND	NA
Hexachlorophene	ND	ND	ND	ND	NA
Naphthalene	ND	ND	ND	ND	NA
1,2,4-trichlorobenzene	ND	ND	ND	ND	NA
1,2,4,5-tetrachlorobenzene	ND	ND	ND	ND	NA
Dioxin:					
2,3,7,8-TCDD	ND	**14**	ND	**6.5J**	NA

Notes:
VOC and SVOC results in ug/l (ppb)
2,3,7,8-TCDD results in pg/l (ppq) (Estimated detection limit is 2 pg/l)
ND = not detected
NA = not analyzed
J = Estimated value: concentration is below limit of quantitation
B = Method blank contamination. The associated method blank contains the analyte at a reportable level.
Please note that OU-1 wells MW-12, MW-13, and MW-19 were not sampled
Laboratory = Severn Trent Laboratory, Inc. - Earth City, MO

Trench Wells Sampling Results
Annual sampling conducted in August 2004

Well	MW-11	MW-17	MW-18	MW-20	Trip Blank
VOCs:					
Acetone	**3.3J**	ND	**5.8J**	ND	**3.9J**
Chlorobenzene	ND	**43**	ND	ND	ND
Methylene chloride	ND	ND	ND	ND	**3.9J**
1,4-Dioxane	ND	ND	ND	ND	ND
Ethylbenzene	ND	ND	ND	ND	ND
1,1,2,2-tetrachloroethane	ND	ND	ND	ND	ND
Tetrachloroethene	ND	ND	ND	ND	ND
1,4-dichlorobenzene	ND	**6.7**	ND	ND	ND
Toluene	ND	ND	ND	ND	ND
Xylene (total)	ND	ND	ND	ND	ND
SVOCs:					
Bis (2-ethylhexyl)phthalate	ND	ND	ND	ND	NA
1,3-dichlorobenzene	ND	ND	ND	ND	NA
Hexachlorophene	ND	ND	ND	ND	NA
Naphthalene	ND	ND	ND	ND	NA
1,2,4-trichlorobenzene	ND	ND	ND	ND	NA
1,2,4,5-tetrachlorobenzene	ND	ND	ND	ND	NA
Dioxin:					
2,3,7,8-TCDD	ND	**15**	ND	ND	NA

Notes:
VOC and SVOC results in ug/l (ppb)
2,3,7,8-TCDD results in pg/l (ppq) (Estimated detection limit is 2 pg/l)
ND = not detected
NA = not analyzed
J = Estimated value: concentration is below limit of quantitation
Please note that OU-1 wells MW-12, MW-13, and MW-19 were not sampled
Laboratory = Severn Trent Laboratory, Inc. - Earth City, MO

Trench Wells Sampling Results
Annual sampling conducted in August 2005

Well	MW-11	MW-17	MW-18	MW-20	Trip Blank
VOCs:					
Acetone	ND	**4.8J**	**4.4J**	ND	ND
Chlorobenzene	ND	**53**	ND	ND	ND
Methylene chloride	ND	ND	ND	ND	ND
1,4-Dioxane	ND	**25J**	ND	ND	ND
Ethylbenzene	ND	**0.5J**	ND	ND	ND
1,1,2,2-tetrachloroethane	ND	ND	ND	ND	ND
Tetrachloroethene	ND	ND	ND	ND	ND
1,4-dichlorobenzene	ND	**8.3**	ND	ND	ND
Toluene	ND	ND	ND	ND	ND
Xylene (total)	ND	ND	ND	ND	ND
SVOCs:					
Bis (2-ethylhexyl)phthalate	ND	ND	ND	ND	NA
1,3-dichlorobenzene	ND	ND	ND	ND	NA
Hexachlorophene	ND	ND	ND	ND	NA
Naphthalene	ND	ND	ND	ND	NA
1,2,4-trichlorobenzene	ND	ND	ND	ND	NA
1,2,4,5-tetrachlorobenzene	ND	ND	ND	ND	NA
Dioxin:					
2,3,7,8-TCDD	ND	**4.8J**	**2.3QJ**	**3.6QJ**	NA

Notes:
VOC and SVOC results in ug/l (ppb)
2,3,7,8-TCDD results in pg/l (ppq) (Estimated detection limit is 2 pg/l)
ND = not detected
NA = not analyzed
J = Estimated value: concentration is below limit of quantitation
Q = Estimated maximum possible concentration
Please note that OU-1 wells MW-12, MW-13, and MW-19 were not sampled
Laboratory = Severn Trent Laboratory, Inc. - Earth City, MO

Trench Wells Sampling Results
Annual sampling conducted in August 2006

Well	MW-11	MW-17	MW-18	MW-20	Trip Blank
VOCs:					
Acetone	ND	**23J**	**6.3J**	**5.8J**	ND
Chlorobenzene	ND	**14**	ND	ND	ND
Methylene chloride	ND	**3.3J**	ND	ND	ND
1,4-Dioxane	ND	ND	ND	ND	ND
Ethylbenzene	ND	ND	ND	ND	ND
1,1,2,2-tetrachloroethane	ND	ND	ND	ND	ND
Tetrachloroethene	ND	ND	ND	ND	ND
1,4-dichlorobenzene	ND	ND	ND	ND	ND
Toluene	**1.2JB**	**1JB**	**0.31JB**	**1.1JB**	**0.92JB**
Xylene (total)	ND	ND	ND	ND	ND
SVOCs:					
Bis (2-ethylhexyl)phthalate	ND	ND	ND	ND	NA
1,3-dichlorobenzene	ND	ND	ND	ND	NA
Hexachlorophene	ND	ND	ND	ND	NA
Naphthalene	ND	ND	ND	ND	NA
1,2,4-trichlorobenzene	ND	ND	ND	ND	NA
1,2,4,5-tetrachlorobenzene	ND	ND	ND	ND	NA
Dioxin:					
2,3,7,8-TCDD	ND	**3.3QJ**	ND	**7.9QJ**	NA

Notes:
VOC and SVOC results in ug/l (ppb)
2,3,7,8-TCDD results in pg/l (ppq) (Estimated detection limit is 2 pg/l)
ND = not detected
NA = not analyzed
J = Estimated value: concentration is below limit of quantitation
B = Method blank contamination. The associated method blank contains the analyte at a reportable level.
Q = Estimated maximum possible concentration
Please note that OU-1 wells MW-12, MW-13, and MW-19 were not sampled
Laboratory = Severn Trent Laboratory, Inc. - Earth City, MO

BCP Ingredients Inspection Form

CERCLA OU-1 SOIL REMEDIATED AREAS

(DIOXIN / PCB CAPPED AREAS)

1. All remediated areas (maps attached) will be inspected quarterly. The inspections will be documented using the following table:

Date: 5/9/07 1100

Time:

Inspector: Terry Anderson

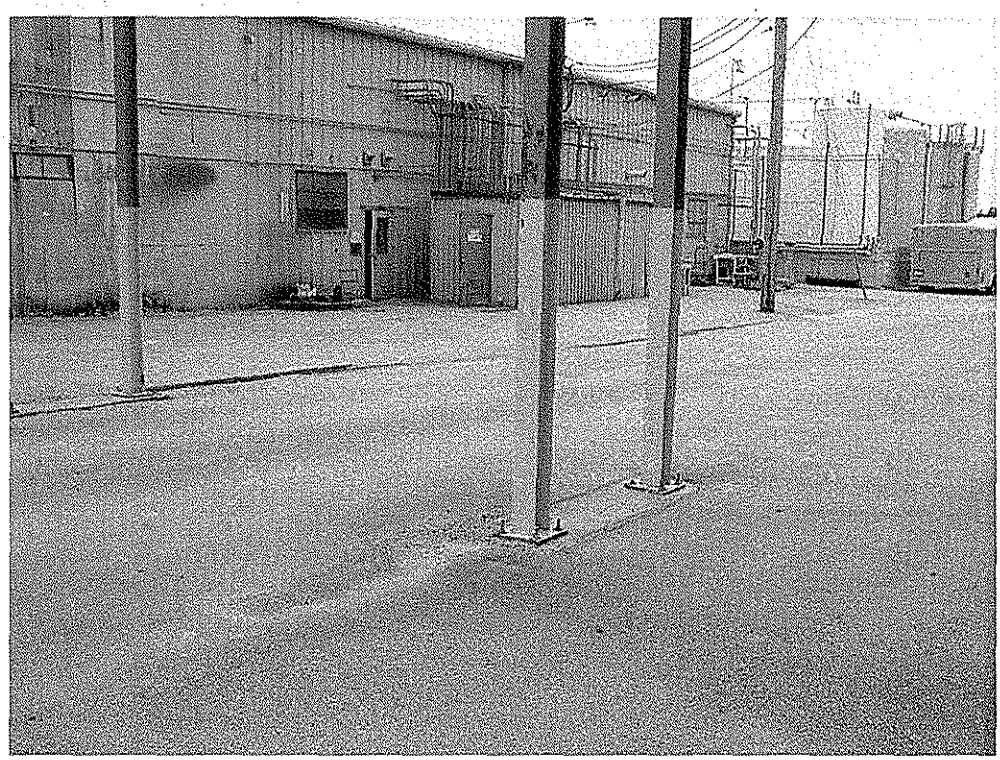
	Burn Area	Irrigation Area V-35	Lagoon Area	Slough Area	Spill Area N-V35	T-1 Dike Area middle
Vegetative / Asphalt cover continuous: no exposed soil?	✓	✓	✓	✓	✓	✓
Intrusive vegetation (brush, shrubs) in cover?	✓	✓	✓	1	✓	✓
Surface subsidence / setting?	✓	✓	✓	✓	✓	✓
Evidence of run - on / ponding of surface water?	✓	✓	✓	1	✓	✓
Surface disruption / disturbance (cracks, rills, burrows, erosion)?	✓	✓	✓	✓	✓	✓
Site delineated (posted signed visible / legible and cable tight)?	REMOVED SIGN	✓	REMOVED SIGN	2	3	3
Other observations / comments: 1. The slough area naturally has running water and brush. Note only unusual conditions, which could lead to exposure. 2. Slough area is marked by posts only. 3. Spill and T-1 Dike areas delineated by survey markers and yellow paint borders.						

2. Submit completed documentation to the Environmental Coordinator.
3. Submit a work order for maintenance required (broken or bent poles, loose cables, asphalt patching, grass seeding, soil addition to depressions). The source of any soil added must be documented and submitted to the Environmental Coordinator.
4. Contact Shipping and Receiving to mow capped area if high grasses hinder surface inspection for cracks, burrows, etc.
5. If it is suspected that a soil remediated area has been penetrated 6" deep, implement the response plan:
   a. Leave equipment in place;
   b. Tape off area of possible dust exposure;
   c. Wet area of penetration to prevent dust migration;
   d. Provide notice over intercom to notify all employees and contractors to stay away from area;
   e. Post notice in PSP office, locker room, lunchroom, lab, and V-18 supervisor's office to stay away from area;
   f. Call Sandra Potter of The Forrester Group @ 417-864-6444 ext. 119, C: 417-827-5765;
   g. Call Terry Anderson @ extension 3455, P: 417-888-1712, H-235-6261
   h. Call Balchem Corporate Regulatory Compliance @ W: 845-355-5300, C: 845-551-0753, P: 845-975-3052

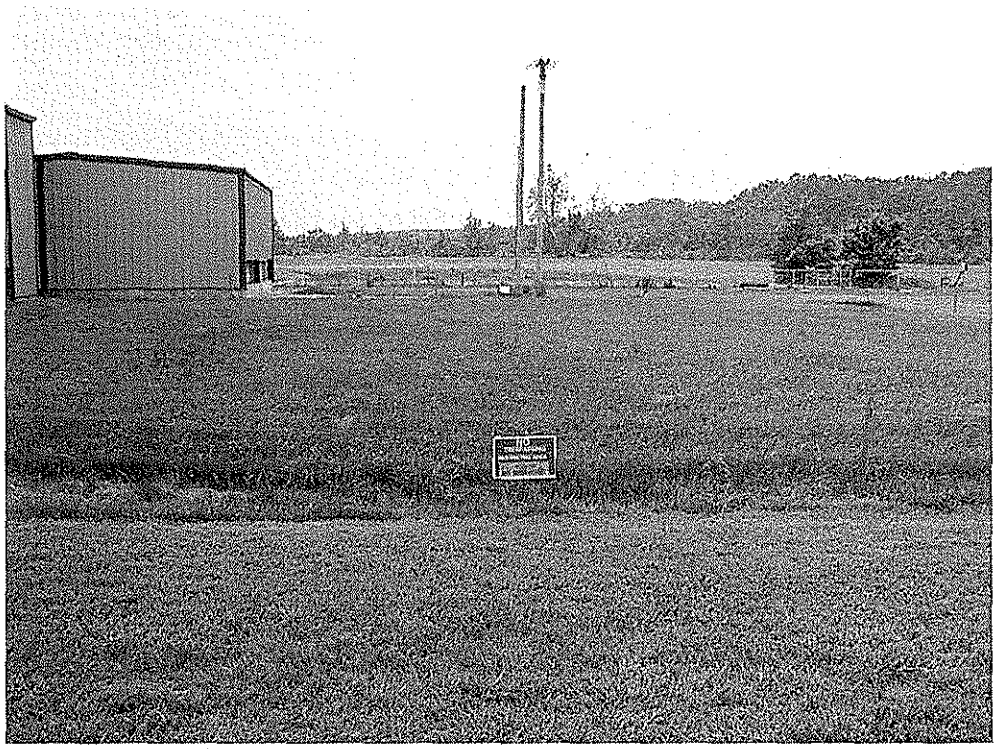
Attachment C

SITE INSPECTION PHOTOGRAPHS

Spill Area Asphalt Cap – truck parked on cap – delineated by yellow lines



T-1 Dike Area Asphalt Cap



Irrigation Area Vegetative Cap – note warning sign

Burn Area Vegetative Cap

Lagoon Area Vegetative Cap – Picture 1 of 4

Lagoon Area Vegetative Cap – Picture 2 of 4

Lagoon Area Vegetative Cap – Picture 3 of 4

Lagoon Area Vegetative Cap – Picture 4 of 4

Slough Area – Picture 1 of 2

Slough Area – Picture 2 of 2

Trench Area Vegetative Cap

Attachment D

SITE INSPECTION CHECKLIST

SITE INSPECTION ROSTER

Site Inspection Checklist

I. SITE INFORMATION	
Site name: Syntex Facility Site	**Date of inspection:** June 7, 2007
Location and Region: Verona, Lawrence County, Missouri	**EPA ID:** MOD007452154
Agency, office, or company leading the five-year review: U.S. EPA Region 7	**Weather/temperature:** Sunny, 80s

Remedy Includes: (Check all that apply)

- ☐ Landfill cover/containment
- ☒ Access controls
- ☒ Institutional controls
- ☐ Groundwater pump and treatment
- ☐ Surface water collection and treatment
- ☒ Other: Remedy includes vegetative and asphalt caps
- ☐ Monitored natural attenuation
- ☐ Groundwater containment
- ☐ Vertical barrier walls

Attachments: ☒ Inspection team roster attached ☐ Site map attached

II. INTERVIEWS (Check all that apply)

1. **O&M site manager** Sandra Potter (Name) The Forrester Group (Title) 6/7/2007 (Date)
   Interviewed ☒ at site ☐ at office ☐ by phone Phone no. _____
   Problems, suggestions; ☐ Report attached _____

2. **O&M staff** Terry Anderson (Name) BCP Ingredients (Title) 6/7/2007 (Date)
   Interviewed ☒ at site ☐ at office ☐ by phone Phone no. _____
   Problems, suggestions; ☐ Report attached _____

3. **Local regulatory authorities and response agencies** (i.e., State and Tribal offices, emergency response office, police department, office of public health or environmental health, zoning office, recorder of deeds, or other city and county offices, etc.) Fill in all that apply.

Agency _____
Contact _____ _____ _____ _____
Name Title Date Phone no.
Problems; suggestions; ☐ Report attached _____

Agency _____
Contact _____ _____ _____ _____
Name Title Date Phone no.
Problems; suggestions; ☐ Report attached _____

Agency _____
Contact _____ _____ _____ _____
Name Title Date Phone no.
Problems; suggestions; ☐ Report attached _____

Agency _____
Contact _____ _____ _____ _____
Name Title Date Phone no.
Problems; suggestions; ☐ Report attached _____

4. **Other interviews** (optional) ☐ Report attached.

III. ON-SITE DOCUMENTS & RECORDS VERIFIED (Check all that apply)

1. **O&M Documents**
   - ☐ O&M manual — ☐ Readily available — ☐ Up to date — ☐ N/A
   - ☒ As-built drawings — ☒ Readily available — ☒ Up to date — ☐ N/A
   - ☒ Maintenance logs — ☒ Readily available — ☒ Up to date — ☐ N/A

   Remarks BCP Ingredients provided inspection/maintenance logs dating back to last five year review. Instruction for inspection and maintenance procedures provided on logs

2. **Site-Specific Health and Safety Plan** — ☐ Readily available — ☐ Up to date — ☒ N/A
   - ☒ Contingency plan/emergency response plan — ☒ Readily available — ☒ Up to date — ☐ N/A

   Remarks Inspection checklist identifies contact numbers in case of problems. Signs posted warning to stay away from capped areas.

3. **O&M and OSHA Training Records** — ☐ Readily available — ☐ Up to date — ☒ N/A

   Remarks

4. **Permits and Service Agreements**
   - ☐ Air discharge permit — ☐ Readily available — ☐ Up to date — ☒ N/A
   - ☐ Effluent discharge — ☐ Readily available — ☐ Up to date — ☒ N/A
   - ☐ Waste disposal, POTW — ☐ Readily available — ☐ Up to date — ☒ N/A
   - ☐ Other permits _____ — ☐ Readily available — ☐ Up to date — ☒ N/A

   Remarks

5. **Gas Generation Records** — ☐ Readily available — ☐ Up to date — ☒ N/A

   Remarks

6. **Settlement Monument Records** — ☐ Readily available — ☐ Up to date — ☒ N/A

   Remarks

7. **Groundwater Monitoring Records** — ☒ Readily available — ☒ Up to date — ☐ N/A

   Remarks

8. **Leachate Extraction Records** — ☐ Readily available — ☐ Up to date — ☒ N/A

   Remarks

9. **Discharge Compliance Records**
   - ☐ Air — ☐ Readily available — ☐ Up to date — ☒ N/A
   - ☐ Water (effluent) — ☐ Readily available — ☐ Up to date — ☒ N/A

   Remarks

10. **Daily Access/Security Logs** — ☒ Readily available — ☒ Up to date — ☐ N/A

    Remarks Controlled access gate to enter facility. Sign in, visitor badge, and escort required.

IV. O&M COSTS

1. **O&M Organization**

☐ State in-house ☐ Contractor for State
☐ PRP in-house ☒ Contractor for PRP
☐ Federal Facility in-house ☐ Contractor for Federal Facility
☐ Other _____

2. **O&M Cost Records**

☒ Readily available ☒ Up to date
☐ Funding mechanism/agreement in place
Original O&M cost estimate _____ ☐ Breakdown attached

Total annual cost by year for review period if available

From _____ (Date) To _____ (Date) _____ (Total cost) ☐ Breakdown attached
From _____ (Date) To _____ (Date) _____ (Total cost) ☐ Breakdown attached
From _____ (Date) To _____ (Date) _____ (Total cost) ☐ Breakdown attached
From _____ (Date) To _____ (Date) _____ (Total cost) ☐ Breakdown attached
From _____ (Date) To _____ (Date) _____ (Total cost) ☐ Breakdown attached

3. **Unanticipated or Unusually High O&M Costs During Review Period**

Describe costs and reasons: _____

V. ACCESS AND INSTITUTIONAL CONTROLS ☒ Applicable ☐ N/A

A. Fencing

1. **Fencing damaged** ☒ Location shown on site map ☒ Gates secured ☒ N/A

Remarks Controlled access gate. Eight foot fence surrounding site in good condition.

B. Other Access Restrictions

1. **Signs and other security measures** ☒ Location shown on site map ☐ N/A

Remarks Warning signs posted around all capped areas. Fence posts and cable surround vegetative covers. Yellow painted borders of capped areas identified on asphalt caps.

C. Institutional Controls (ICs)

1. **Implementation and enforcement**

Site conditions imply ICs not properly implemented ☐ Yes ☒ No ☐ N/A

Site conditions imply ICs not being fully enforced ☐ Yes ☒ No ☐ N/A

Type of monitoring (*e.g.*, self-reporting, drive by) Inspection of capped areas and access controls

Frequency Annual inspection by State of Missouri, quarterly inspection by property owner

Responsible party/agency Syntex –

Contact Sandra Potter (Name) The Forrester Group (Title) _____ (Date) 417-864-6444, Ext. 119 (Phone no.)

Reporting is up-to-date ☒ Yes ☐ No ☐ N/A

Reports are verified by the lead agency ☒ Yes ☐ No ☐ N/A

Specific requirements in deed or decision documents have been met ☒ Yes ☐ No ☐ N/A

Violations have been reported ☐ Yes ☐ No ☒ N/A

Other problems or suggestions: ☐ Report attached

2. **Adequacy** ☒ ICs are adequate ☐ ICs are inadequate ☐ N/A

Remarks Copy of Deed obtained from Lawrence County Recorder of Deeds. Deed restricts land use to industrial and identifies site as being on the Missouri Registry of Confirmed Abandoned or Uncontrolled Hazardous Waste Disposal Sites. Any substantial change in property use must be approved by MDNR.

D. General

1. **Vandalism/trespassing** ☐ Location shown on site map ☒ No vandalism evident

Remarks _____

2. **Land use changes on site** ☐ N/A

Remarks There had been no change in land use on site.

3. **Land use changes off site** ☐ N/A

Remarks No apparent change in land use in vicinity of site.

VI. GENERAL SITE CONDITIONS

A. Roads ☒ Applicable ☐ N/A

1. **Roads damaged** ☐ Location shown on site map ☒ Roads adequate ☐ N/A

Remarks Roads used to access various subsites during inspection were adequate.

B. Other Site Conditions

Remarks All subsites inspected were in very good condition and appeared to be well maintained.

VII. LANDFILL COVERS ☒ Applicable ☐ N/A

A. Landfill Surface

1. **Settlement** (Low spots) ☐ Location shown on site map ☒ Settlement not evident
   Areal extent _____ Depth _____
   Remarks _____

2. **Cracks** ☐ Location shown on site map ☒ Cracking not evident
   Lengths _____ Widths _____ Depths _____
   Remarks _____

3. **Erosion** ☐ Location shown on site map ☒ Erosion not evident
   Areal extent _____ Depth _____
   Remarks _____

4. **Holes** ☐ Location shown on site map ☒ Holes not evident
   Areal extent _____ Depth _____
   Remarks _____

5. **Vegetative Cover** ☒ Grass ☒ Cover properly established ☒ No signs of stress
   ▪ Trees/Shrubs (indicate size and locations on a diagram)
   Remarks _____

6. **Alternative Cover (armored rock, concrete, etc.)** ☐ N/A
   Remarks Overall in very good condition. Minor crack sealing is recommended.

7. **Bulges** ☐ Location shown on site map ☒ Bulges not evident
   Areal extent _____ Height _____
   Remarks _____

8. **Wet Areas/Water Damage** ☒ Wet areas/water damage not evident
- ☐ Wet areas ☐ Location shown on site map Areal extent_____
- ☐ Ponding ☐ Location shown on site map Areal extent_____
- ☐ Seeps ☐ Location shown on site map Areal extent_____
- ☐ Soft subgrade ☐ Location shown on site map Areal extent_____

Remarks_____

9. **Slope Instability** ☐ Slides ☐ Location shown on site map ☒ No evidence of slope instability
Areal extent_____
Remarks_____

B. Benches ☐ Applicable ☒ N/A
(Horizontally constructed mounds of earth placed across a steep landfill side slope to interrupt the slope in order to slow down the velocity of surface runoff and intercept and convey the runoff to a lined channel.)

1. **Flows Bypass Bench** ☐ Location shown on site map ☒ N/A or okay
Remarks_____

2. **Bench Breached** ☐ Location shown on site map ☒ N/A or okay
Remarks_____

3. **Bench Overtopped** ☐ Location shown on site map ☒ N/A or okay
Remarks_____

C. Letdown Channels ☐ Applicable ☒ N/A
(Channel lined with erosion control mats, riprap, grout bags, or gabions that descend down the steep side slope of the cover and will allow the runoff water collected by the benches to move off of the landfill cover without creating erosion gullies.)

1. **Settlement** ☐ Location shown on site map ☐ No evidence of settlement
Areal extent_____ Depth_____
Remarks_____

2. **Material Degradation** ☐ Location shown on site map ☐ No evidence of degradation
Material type_____ Areal extent_____
Remarks_____

3. **Erosion** ☐ Location shown on site map ☐ No evidence of erosion
Areal extent_____ Depth_____
Remarks_____

4. **Undercutting** ☐ Location shown on site map ☐ No evidence of undercutting
Areal extent_____ Depth_____
Remarks_____

5. **Obstructions** Type_____ ☐ No obstructions
■ Location shown on site map Areal extent_____
Size_____
Remarks_____

6. **Excessive Vegetative Growth** Type_____
☐ No evidence of excessive growth
☐ Vegetation in channels does not obstruct flow
☐ Location shown on site map Areal extent_____
Remarks_____

D. Cover Penetrations ☐ Applicable ☒ N/A

1. **Gas Vents** ☐ Active ☐ Passive
☐ Properly secured/locked ☐ Functioning ☐ Routinely sampled ☐ Good condition
☐ Evidence of leakage at penetration ☐ Needs Maintenance
☐ N/A
Remarks_____

2. **Gas Monitoring Probes**
☐ Properly secured/locked ☐ Functioning ☐ Routinely sampled ☐ Good condition
☐ Evidence of leakage at penetration ☐ Needs Maintenance ☐ N/A
Remarks_____

3. **Monitoring Wells** (within surface area of landfill)
☐ Properly secured/locked ☐ Functioning ☐ Routinely sampled ☐ Good condition
☐ Evidence of leakage at penetration ☐ Needs Maintenance ☐ N/A
Remarks_____

4. **Leachate Extraction Wells**
☐ Properly secured/locked ☐ Functioning ☐ Routinely sampled ☐ Good condition
☐ Evidence of leakage at penetration ☐ Needs Maintenance ☐ N/A
Remarks_____

5. **Settlement Monuments** ☐ Located ☐ Routinely surveyed ☐ N/A
Remarks_____

E. Gas Collection and Treatment ☐ Applicable ☒ N/A

1. **Gas Treatment Facilities**
   ☐ Flaring ☐ Thermal destruction ☐ Collection for reuse
   ☐ Good condition ☐ Needs Maintenance
   Remarks_____

2. **Gas Collection Wells, Manifolds and Piping**
   ☐ Good condition ☐ Needs Maintenance
   Remarks_____

3. **Gas Monitoring Facilities** (*e.g.*, gas monitoring of adjacent homes or buildings)
   ☐ Good condition ☐ Needs Maintenance ☐ N/A
   Remarks_____

F. Cover Drainage Layer ☐ Applicable ☒ N/A

1. **Outlet Pipes Inspected** ☐ Functioning ☐ N/A
   Remarks_____

2. **Outlet Rock Inspected** ☐ Functioning ☐ N/A
   Remarks_____

G. Detention/Sedimentation Ponds ☐ Applicable ☒ N/A

1. **Siltation** Areal extent_____ Depth_____ ☐ N/A
   ☐ Siltation not evident
   Remarks_____

2. **Erosion** Areal extent_____ Depth_____
   ☐ Erosion not evident
   Remarks_____

3. **Outlet Works** ☐ Functioning ☐ N/A
   Remarks_____

4. **Dam** ☐ Functioning ☐ N/A
   Remarks_____

H. Retaining Walls ☐ Applicable ☒ N/A

1. **Deformations** ☐ Location shown on site map ☐ Deformation not evident
   Horizontal displacement_____ Vertical displacement_____
   Rotational displacement_____
   Remarks_____

2. **Degradation** ☐ Location shown on site map ☐ Degradation not evident
   Remarks_____

I. Perimeter Ditches/Off-Site Discharge ☐ Applicable ☒ N/A

1. **Siltation** ☐ Location shown on site map ☐ Siltation not evident
   Areal extent_____ Depth_____
   Remarks_____

2. **Vegetative Growth** ☐ Location shown on site map ☐ N/A
   ☐ Vegetation does not impede flow
   Areal extent_____ Type_____
   Remarks_____

3. **Erosion** ☐ Location shown on site map ☐ Erosion not evident
   Areal extent_____ Depth_____
   Remarks_____

4. **Discharge Structure** ☐ Functioning ☐ N/A
   Remarks_____

VIII. VERTICAL BARRIER WALLS ☐ Applicable ☒ N/A

1. **Settlement** ☐ Location shown on site map ☐ Settlement not evident
   Areal extent_____ Depth_____
   Remarks_____

2. **Performance Monitoring** Type of monitoring_____
   ☐ Performance not monitored
   Frequency_____ ☐ Evidence of breaching
   Head differential_____
   Remarks_____

C. Treatment System ☐ Applicable ☒ N/A

1. **Treatment Train** (Check components that apply)
   - ☐ Metals removal ☐ Oil/water separation ☐ Bioremediation
   - ☐ Air stripping ☐ Carbon adsorbers
   - ☐ Filters_____
   - ☐ Additive (*e.g.*, chelation agent, flocculent)_____
   - ☐ Others_____
   - ☐ Good condition ☐ Needs Maintenance
   - ☐ Sampling ports properly marked and functional
   - ☐ Sampling/maintenance log displayed and up to date
   - ☐ Equipment properly identified
   - ☐ Quantity of groundwater treated annually_____
   - ☐ Quantity of surface water treated annually_____

   Remarks_____

2. **Electrical Enclosures and Panels** (properly rated and functional)
   - ☐ N/A ☐ Good condition ☐ Needs Maintenance

   Remarks_____

3. **Tanks, Vaults, Storage Vessels**
   - ☐ N/A ☐ Good condition ☐ Proper secondary containment ☐ Needs Maintenance

   Remarks_____

4. **Discharge Structure and Appurtenances**
   - ☐ N/A ☐ Good condition ☐ Needs Maintenance

   Remarks_____

5. **Treatment Building(s)**
   - ☐ N/A ☐ Good condition (esp. roof and doorways) ☐ Needs repair
   - ☐ Chemicals and equipment properly stored

   Remarks_____

6. **Monitoring Wells** (pump and treatment remedy)
   - ☐ Properly secured/locked ☐ Functioning ☐ Routinely sampled ☐ Good condition
   - ☐ All required wells located ☐ Needs Maintenance ☐ N/A

   Remarks_____

D. Monitoring Data - SEE DISCUSSION ON MONITORING DATA IN REPORT

1. Monitoring Data
   - ☐ Is routinely submitted on time ☐ Is of acceptable quality

2. Monitoring data suggests:
   - ☐ Groundwater plume is effectively contained ☐ Contaminant concentrations are declining

D. Monitored Natural Attenuation

1. **Monitoring Wells** (natural attenuation remedy)
☐ Properly secured/locked ☐ Functioning ☐ Routinely sampled ☐ Good condition
☐ All required wells located ☐ Needs Maintenance ☐ N/A
Remarks_____

X. OTHER REMEDIES

If there are remedies applied at the site which are not covered above, attach an inspection sheet describing the physical nature and condition of any facility associated with the remedy. An example would be soil vapor extraction.

XI. OVERALL OBSERVATIONS

A. Implementation of the Remedy

Describe issues and observations relating to whether the remedy is effective and functioning as designed. Begin with a brief statement of what the remedy is to accomplish (i.e., to contain contaminant plume, minimize infiltration and gas emission, etc.).

See report text

B. Adequacy of O&M

Describe issues and observations related to the implementation and scope of O&M procedures. In particular, discuss their relationship to the current and long-term protectiveness of the remedy.

See report text

C.	**Early Indicators of Potential Remedy Problems**
	Describe issues and observations such as unexpected changes in the cost or scope of O&M or a high frequency of unscheduled repairs, that suggest that the protectiveness of the remedy may be compromised in the future. See report text
D.	**Opportunities for Optimization**
	Describe possible opportunities for optimization in monitoring tasks or the operation of the remedy. See report text

Site Inspection Team Roster		
Personnel	**Representing**	**Phone Number**
Evan Kifer	MDNR	573-751-1990
Paul Speckin	USACE	816-389-3592
Sandra Potter Forrester Group	Syntex	417-864-6444, Ext. 119
Terry Anderson	BCP Ingredients	417-498-3455

Attachment E

REFERENCE LIST

DOCUMENTS REVIEWED

List of Documents Reviewed

- Consent Decree and Agreement in the matter of Syntex Agribusiness, Inc., United States Environmental Protection Agency, September 13, 1983.
- Record of Decision for Final Management of Dioxin Contaminated Soil and Equipment at Syntex Agribusiness, Inc., Verona, Missouri, United States Environmental Protection Agency, May 5, 1988.
- Syntex Agribusiness, Inc. Verona Facility Implementation Plan, Syntex Agribusiness, Inc., July 29, 1988.
- Response and Clarification to Comments Concerning the Remedial Actions at the Verona Facility, J. Kevin Cassil, Syntex Agribusiness, Inc., May 25, 1989.
- Syntex Agribusiness, Inc., Verona, Missouri, Implementation Plan Ground Water Report, Final Report, Radian Corporation, August, 1991.
- Groundwater Remedial Investigation Report for Syntex Agribusiness, Inc., Radian Corporation, August 6, 1992.
- Record of Decision, Ground Water Operable Unit # 2, Syntex Agribusiness, Inc., Verona, Missouri, May 7, 1993.
- Site Review and Update, Syntex Facility – Verona, Missouri Department of Health Bureau of Environmental Epidemiology in Cooperative Agreement with the Agency for Toxic Substances and Disease Registry, August 27, 1993.
- OU2 Implementation Plan for Syntex Agribusiness Inc. Verona, Missouri Facility, Radian Corporation, May, 1995.
- Administrative Order on Consent for Response Actions in the matter of Syntex Facility Site, Verona, Lawrence County, Missouri, July 18, 1997.
- Five-Year Review Report, Syntex Verona Facility, Verona Missouri, Environmental Protection Agency, September 30, 1997.
- Superfund Site Preliminary Closeout Report, Syntex Facility – Verona Site, Verona, Missouri, Environmental Protection Agency, September 16, 1998.
- Remedial Action Report, Syntex Facility Remedial Action, Operable Unit 1, Verona, Missouri, Environmental Protection Agency, September 25, 1998.

- Draft Risk Assessment Report, Operable Unit 2 (OU2) at the former Syntex Agribusiness, Inc. Facility Superfund Site, Verona, Missouri, S.M. Stoller Corporation, February 14, 2000.

- Correspondence, Daryl W. Roberts, Director, Section for Environmental Public Health, Missouri Department of Health, To Judy Facey, United States Environmental Protection Agency, April 26, 2000.

- Memorandum, "Risk Assessment for Operable Unit 2 (OU2) at the former Syntex Agribusiness, Inc. Facility Superfund site, Verona, Missouri, Judy Facey, Toxicologist to Bob Feild, Remedial Project Manager, Unites States Environmental Protection Agency, September 28, 2000.

- Memorandum, "Risk Assessment for Operable Unit 2 (OU2) at the former Syntex Agribusiness, Inc. Facility Superfund site, Verona, Missouri", Judy Facey, PhD, Toxicologist, to Bob Feild, Remedial Project Manager, July 16, 2002.

- Second Five-Year Review Report, Syntex Verona Facility, Verona Missouri, Environmental Protection Agency, September 27, 2002.

- OU2 Voluntary Groundwater Monitoring Report, Syntex Superfund Site, Verona, Missouri, The Forrester Group, May 22, 2006.

- OU2 Groundwater Monitoring Results 2003-2006, Syntex Superfund Site, Verona, Missouri, The Forrester Groups, September 26, 2006.

- Trench Wells Sampling Results 2000-2006.

- BCP Ingredients Inspection Form, CERCLA OU-1 Soil Remediated Areas, 2002-2007.

List of References Reviewed

Federal Register November 7, 2006. Draft Update: ATSDR Policy Guideline for Dioxins and Dioxin-Like Compounds in Residential Soil.

Missouri Code of State Regulations, 10 CSR 60-4. Department of Natural Resources, Division 20 – Safe Drinking Water Commission, Last Publish Date 10/31/03.

Missouri Code of State Regulations, 10 CSR 20-7. Department of Natural Resources, Division 20 – Clean Water Commission, Last Publish Date 11/30/05.

National Resource Council (2006), Health Risks from Dioxin Related Compounds: Evaluation of the EPA Reassessment. ISBN 978-0-309-10259-9.

US Environmental Protection Agency, April 13, 1998. Approach for Addressing Dioxin in Soil at CERCLA and RCRA Sites. Office of Solid Waste and Emergency Response (OSWER) Directive 9200.4-26.

US Environmental Protection Agency, Region 9, October 2004. Preliminary Remediation Goals. http://www.epa.gov/region09/waste/sfund/prg.

US Environmental Protection Agency. National Primary Drinking Water Standards. http://www.epa.gov/safewater/contaminants/index.html (last update November 2006).

US Environmental Protection Agency, Region 3, April 2007. Risk-Based Concentration Tables. http://www.epa.gov/reg3hwmd/risk/human/index.htm.

US Environmental Protection Agency. Water Quality Standards Database. http://oaspub.epa.gov/wqs/wqsi_epa_criteria.report (last update July 2007.)

Attachment F

PUBLIC NOTICE

SITE FACT SHEET

U.S. Environmental Protection Agency (EPA) Region 7
and
Missouri Department of Natural Resources (MDNR)
to conduct
Third Five-Year Review for the
Syntex Facility Superfund Site
Verona, Missouri

EPA and MDNR have begun the third Five-Year Review at the Syntex Facility Superfund Site. The review is required by the Superfund law to make sure the cleanup continues to protect human health and the environment.

The Administrative Record is available at the following locations during normal business hours:

Verona City Hall
101 N. Third St.
Verona, Missouri

EPA Region 7 Records Center
901 N. Fifth St.
Kansas City, Kansas

Questions or requests for information can be submitted to:

Fritz Hirter
Community Involvement Coordinator
U.S. EPA Region 7
901 N. Fifth St.
Kansas City, KS 66101
Toll Free: (800) 223-0425
e-mail: hirter.fritz@epa.gov

Region 7

Iowa
Kansas
Missouri
Nebraska

Fact Sheet

April 2007

Third Five-Year Review to Begin
Syntex Facility Superfund Site
Verona, Lawrence County, Missouri

Introduction

The U.S. Environmental Protection Agency conducts regular five-year reviews on Superfund sites where cleanups have been completed. These reviews are required by the Superfund law [42 U.S.C. Section 9621 (c)]. EPA Region 7 and the Missouri Department of Natural Resources have initiated their third five-year review of the Syntex Facility site in Verona, Lawrence County, Missouri.

Site Background

In the 1960s, the facility was operated by Hoffman-Taff, Inc., and produced 2,4,5-trichlorophenoxyacetic acid (2,4,5-T) for the U.S. Army as an ingredient in the defoliant commonly known as Agent Orange. In 1968, a portion of the facility was leased to the Northeastern Pharmaceutical and Chemical Company, to produce hexachlorophene. In 1969, the facility was purchased by Syntex Agribusiness, Inc. (Syntex).

Dioxin (2,3,7,8-tetrachlorodibenzo-p-dioxin) was created as an unwanted byproduct in the production of 2,4,5-T and hexachlorophene. The dioxin contaminated waste was managed in tanks and lagoons located at the site. Dioxin is considered by EPA to be an extremely toxic contaminant.

Under EPA oversight, Syntex performed cleanup activities beginning in 1983 and continuing until 1998. During the cleanup, processing equipment at the facility was decontaminated and transported offsite for disposal. Dioxin-contaminated soils were excavated and transported offsite for treatment and disposal. A disposal trench located on the bluffs west of the Spring River was first covered with clay, then topsoil, and grass was planted to protect the cover. A gravel channel was also installed to intercept ground water before it could contact the disposal trench. A series of monitoring wells were installed to evaluate and monitor the impact of the site on local ground water quality. A risk assessment report considered the results of the ground water monitoring. This risk assessment is currently under review by EPA and the Missouri Department of Natural Resources.

Five-Year Review

EPA and the Missouri Department of Natural Resources will study site

information during this third five-year review and inspect the site to determine if the remedy continues to protect human health and the environment. EPA and the state encourage members of the community to ask questions and report any concerns about the site.

A final report will be prepared at the end of the review and will be available at the site information repositories.

Additional Information

The site administrative record is available at the following locations during normal business hours:

EPA Records Center
901 N. Fifth St.
Kansas City, Kan.

Verona City Hall
101 N. Third St.
Verona, Mo.

Questions or requests for information can be submitted to:

Fritz Hirter
Community Involvement Coordinator
EPA Region 7
901 N. Fifth St.
Kansas City, KS 66101
Toll free: (800) 223-0425
e-mail: hirter.fritz@epa.gov