

FIVE-YEAR REVIEW REPORT

BYRON SALVAGE YARD SUPERFUND SITE
OGLE COUNTY, ILLINOIS

Prepared by:
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Region 5
Chicago, Illinois

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Date

Executive Summary

The remedy for the Byron Salvage Yard Site in Ogle County, Illinois included excavation of contaminated soils for off-site disposal, connection to the city of Byron water system for some residents with wells contaminated above MCLs, construction of an additional city water well with connection to the water system to be completed by September 2003, and annual monitoring of monitoring and residential wells. The trigger for this five year review was the last five year review completed on September 30, 1998.

The assessment of this five-year review found that the remedy was constructed in accordance with the requirements of the Records of Decision. The remedy is functioning as designed and the immediate and long term threats have been addressed. The city water well and water line will become the primary source of water for the people living in Rock River Terrace and the current system will serve as a backup system. It appears that the removal of contaminated soils from Dirk's Farm may have removed the source of a plume which contaminates water in Equestrian Estates at levels below that which requires action. Monitoring of residential wells and the new monitoring wells will be conducted to confirm this.

Five-Year Review Summary Form

SITE IDENTIFICATION		
Site name (from WasteLAN): Byron Salvage Yard		
EPA ID (from WasteLAN): ILD010236230		
Region: V	State: IL	City/County: Byron
SITE STATUS		
NPL status: <input checked="" type="checkbox"/> Final <input type="checkbox"/> Deleted <input type="checkbox"/> Other (specify) _____		
Remediation status (choose all that apply): <input checked="" type="checkbox"/> Under Construction <input type="checkbox"/> Operating <input type="checkbox"/> Complete		
Multiple OUs?* <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	Construction completion date: ___ / ___ / _____	
Has site been put into reuse? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		
REVIEW STATUS		
Lead agency: <input checked="" type="checkbox"/> EPA <input type="checkbox"/> State <input type="checkbox"/> Tribe <input type="checkbox"/> Other Federal Agency _____		
Author name: Anthony Rutter		
Author title: RPM	Author affiliation: USEPA	
Review period:** 01 / 07 / 2003 to 08 / 11 / 2003		
Date(s) of site inspection: 08 / 11 / 2003		
Type of review: <input checked="" type="checkbox"/> Post-SARA <input type="checkbox"/> Pre-SARA <input type="checkbox"/> NPL-Removal only <input type="checkbox"/> Non-NPL Remedial Action Site <input type="checkbox"/> NPL State/Tribe-lead <input type="checkbox"/> Regional Discretion		
Review number: <input type="checkbox"/> 1 (first) <input checked="" type="checkbox"/> 2 (second) <input type="checkbox"/> 3 (third) <input type="checkbox"/> Other (specify) _____		
Triggering action: <input checked="" type="checkbox"/> Actual RA Onsite Construction at OU #4 _____ Actual RA Start at OU# _____ <input type="checkbox"/> Construction Completion <input type="checkbox"/> Previous Five-Year Review Report <input type="checkbox"/> Other (specify) _____		
Triggering action date (from WasteLAN): 09 / 30 / 1998		
Due date (five years after triggering action date): 09/30 / 2003		

* ["OU" refers to operable unit.]

I. INTRODUCTION

The purpose of the five year review 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 identify recommendations to address them.

The Agency is preparing this Five Year Review report pursuant to CERCLA Section 121 and the National Contingency Plan (NCP). CERCLA Section 121 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 judgement 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.

The Agency interpreted this requirement further in the NCP; 40 CFR Section 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.

The United States Environmental Protection Agency (U. S. EPA), Region 5, conducted the five year review of the remedy implemented at the Byron Salvage Yard Superfund site near Byron, Illinois. This review was conducted by the Remedial Project Manager (RPM) for the entire site from May 2003 through August 2003. This report documents the results of the review.

This is the second five year review for the Byron Salvage Yard site. The triggering action for this statutory review was the previous five year review completed on September 30, 1998. The five year review is required due to the fact that hazardous substances, pollutants, or contaminants remain at the site above levels that allow for unlimited use and unrestricted exposure.

II. Site Chronology

1986-1990	Removal activities-removal of drums, liquids, sludge, and contaminated soils from the site.
Feb. 1997	Remedial Investigation/Feasibility Study made available to the public.
Sept. 24, 1998	Soils remedy ROD is signed.
Dec. 23, 1999	Water supply and groundwater monitoring ROD is signed
Dec. 28, 2000	Consent Decree entered for Dirk's Farm work.
Apr. 18, 2002	Remedial design complete for Dirk's Farm soil removal.
Sept. 17, 2002	Remedial action complete at Dirk's Farm.
Oct. 25, 2002	Consent Decree entered for Byron Salvage Yard soils.
Oct. 25, 2002	Consent Decree entered for water supply well and groundwater sampling.
Apr. 28, 2003	Design completed for Byron municipal well and water line.

III. Background

The Byron Salvage Yard Superfund Site is comprised of primarily two parcels of land - the Byron Salvage Yard (BSY) and the Dirks Farm Property (DFP). The location of the site is shown on figure 1.1 In the 1960's, the BSY was operated as a junk yard where miscellaneous waste and debris were brought for disposal. The disposal practices continued until about 1972. Drums of electroplating wastes and other materials (oil sludges, paint sludges, cutting wheels, solvents, and scrap metal) were disposed of at the BSY. Industrial wastes were reportedly dumped directly on the ground at times of heavy rainfall, and the waste would be carried off the BSY by the resulting surface waste runoff. Similar dumping practices were also carried out during this time at the DFP. There were four primary disposal areas on the DFP, referred to as the North, South, East, and West Disposal Areas, located 300 to 1,200 feet west of Razorville Road. Five other smaller disposal areas on the DFP were also identified.

The discovery of these dumping practices prompted a series of regulatory actions that culminated in the Site being placed on the National Priorities List (NPL) in 1982. Various site investigation and remediation activities have been carried out at both the

BSY and the DFP properties since contamination was documented.

A significant amount of cleanup work was done in connection with the Site. The following is a brief summary of the previous activities conducted at the Site after its placement on the NPL:

(1) In July 1984, under an emergency action, the U. S. EPA began supplying bottled water to residents along Razorville Road and Acorn Road whose private water supplies indicated actual or probable TCE contamination, and

(2) The residents receiving bottled water were subsequently supplied carbon adsorption treatment units in April 1986.

From late 1984 to May 1985, the U. S. EPA issued a contract for the execution of additional RI/FS activities specifically designed to supplement the Illinois Environmental Protection Agency (Illinois EPA) RI/FS and to further investigate groundwater contamination emanating from the BSY. The RI/FS was expanded to include a Phased FS for investigation of residential well contamination in the Rock River Terrace subdivision. Also during 1985, U. S. EPA erected a fence along the site perimeter and posted warning signs.

In July 1986, the Illinois EPA signed a Record of Decision (ROD) for the design and construction of a water line to distribute potable water from the city of Byron municipal water supply to residences in Rock River Terrace and along Acorn and Razorville Roads. During the fall of 1986, Illinois EPA concluded cleanup and removal actions at the BSY. Activities included excavation of buried drums; removal of surface drums; removal of soils heavily contaminated with heavy metals and VOCs; removal of soils with cyanide concentrations greater than 100 ppm; in situ treatment of soils with cyanide contamination less than 100 ppm; removal of miscellaneous debris; and, backfilling and regrading for erosion control.

In June 1989, the U. S. EPA signed a ROD providing for the extension of the Illinois EPA-funded Rock River Terrace subdivision water supply system to provide additional residents with an alternative supply of drinkable water.

From 1990 to 1994, the U. S. EPA determined that a number of unanswered questions remained concerning the nature and extent of contamination on the DFP. An RI was initiated to: 1) delineate the nature and extent of contamination at the DFP; 2) identify and evaluate potential rates of contaminant migration; and, 3) assess the risk posed to human health and the environment from the site.

Chemicals found at the site included: 1) metals- including chromium, copper lead, zinc mercury, and nickel; 2) cyanide; and 3) organic chemicals- including toluene, tetrachloroethylene, xylenes, and trichloroethylene.

IV. Remedial Actions

A. REMEDIAL OBJECTIVES OF O.U. #1

The remedial objectives of Operable Unit #1 included:

- Supplying bottled water to residents, and;
- Limiting site access

B. REMEDIAL OBJECTIVES OF O.U. #2

The remedial objectives of Operable Unit #2 included:

- Providing additional residences with bottled water, and;
- Supplying affected or potentially affected residences with carbon adsorption units

C. REMEDIAL OBJECTIVES OF O.U. #3

The remedial objectives of the Illinois EPA Operable Unit #3 ROD dated July 1986 were:

- Construction of a municipal water-line to residents of Rock River Terrace and along Acorn and Razorville Roads;
- Removal of surface drums and excavation/removal of buried drums;
- Removal of soils contaminated with heavy metals and VOCs;
- Removal of soils with cyanide concentrations of greater than 100 ppm;
- In situ treatment of soils with cyanide concentrations less than 100 ppm;
- Removal of miscellaneous debris; and,
- Backfilling and regrading for erosion control.

The remedial objectives of the U. S. EPA Operable Unit #3 ROD dated June 1989 were to:

- Extend the existing municipal water-line to an additional twenty-seven residents in the Rock River Terrace subdivision;
- Remove all wastes generated during the Remedial Investigation at the site;
- Install additional monitoring wells near the Rock River;
- Collect and analyze groundwater samples from the new wells at the Rock River determined to be necessary for long-term monitoring; and
- Perform surface water sampling at the Meyer Spring Pond and Rock River

determined to be necessary for long-term monitoring.

D. REMEDIAL OBJECTIVES OF O. U. #4

The remedial objectives of the September 24, 1998 ROD were:

- . Soil cover over the metal-contaminated soil areas.
- . Surface control technologies such as grading and re-vegetation.
- . Soil excavation of VOC contaminated areas and off-site disposal at a subtitle D landfill.

The objectives of the December 23, 1999 ROD were:

- . Construction of a water supply well on the same side of the Rock River as Rock River Terrace and connection to the existing water line.
- . Groundwater monitoring consisting of quarterly water level measurements and annual monitoring of monitoring wells and residential wells.

It was determined during design sampling that only one area containing metal contamination required remediation and this area was excavated with disposal of the materials at an off-site subtitle D landfill. This action was documented in an Explanation of Significant Differences dated September 20, 2002.

Remedy Implementation

In July 1984, the U. S. EPA began supplying bottled water to residents along Razorville Road and Acorn Road whose private water supplies indicated actual or probable contamination.

In July 1986, through an emergency action, the U. S. EPA provided carbon adsorption units to those individuals receiving bottled water. These carbon units treated the entire household water supply.

Between October 1986 and January 1987, the Illinois EPA conducted cleanup and removal actions at the Site. Activities included excavation of buried drums; removal of surface drums; removal of soils heavily contaminated with heavy metals and VOCs; removal of soils with cyanide concentrations greater than 100 ppm; in situ treatment of soils with cyanide contamination less than 100 ppm; removal of miscellaneous debris; and, backfilling and regrading for erosion control.

In August 1987, Illinois EPA extended the municipal water supply system from the City of Byron to the Rock River Terrace subdivision. In the summer of 1989, additional residents in the Rock River Terrace subdivision were connected to the municipal water

supply system.

The remedial design for the soils work at Dirk's Farm was completed on April 18, 2002. The contaminated soils were removed and disposed of off-site at a subtitle D landfill between July 29 and August 23, 2002. This work was completed under the Consent Decree entered with the court on December 28, 2000.

The design for the installation of the Byron municipal well and water line was completed on April 28, 2003. The well and water line are being installed during the summer of 2003. This work is being completed under the Consent Decree entered with the court on October 25, 2002.

Operation and Maintenance (Monitoring)

The first round of annual sampling of the residential wells and the monitoring wells was completed during September of 2002. This monitoring consists of the analysis of samples from about 34 residential and monitoring wells for VOC's and cyanide. This work was completed under the Consent Decree for the groundwater entered with the court on October 25, 2002.

V. Progress Since the Last Five Year Review

Since the last five year review the 1998 soils ROD and the 1999 groundwater ROD were signed. The soil ROD was implemented at both Dirk's Farm and at the Byron Salvage Yard. The design for the city well and waterline has been completed and the work will be completed during the summer of 2003.

VI. Five Year Review Process

Administrative Components

The RPM, Anthony Rutter, conducted the five year review including the review of documents and a site area visit on August 11, 2003.

Community Involvement

Community interest has been very limited so interviews were not conducted. The notice of the five year review was published in the local paper. There was a concern by the developers who were building new houses east of the plume coming from the Salvage Yard, that the groundwater in that area would become contaminated. Once the new city well and water line are completed in September 2003, city water will be available in this area which will eliminate this concern. The five-year review will be made available at the site repository.

Documents reviewed:

Remedial Investigation/Feasibility Study 1997

Soil- ROD 1998

Groundwater-ROD 1999

Explanation of Significant Differences 2002

Dirk's Farm Consent Decree 2000

Byron soils Consent Decree 2003

Byron groundwater Consent Decree 2003

VII. Technical Assessment

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

Yes. The remedy is functioning as intended by the decision documents. The people of Rock River Terrace are connected to city water. A new well and waterline will be constructed this summer which will provide a second water source for this community. The water in Rock River Terrace is contaminated by a plume originating at the Byron Salvage Yard. Another community, Equestrian Estates, also has wells contaminated by a separate plume originating from Dirk's Farm. The contamination is well below MCLs. It appears that the soil removed in 2002 was the source area for this contamination. Monitoring wells installed between the source area and Equestrian Estates show only low levels of contamination thus the level of contamination at the estates is not expected to increase. Annual monitoring of these residential wells will continue as long as necessary.

Question B: Are the exposure assumptions, toxicity data, cleanup levels, and remedial action objectives (RAOs) used at the time of the 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.

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

No.

Technical Assessment Summary

Currently the surface soils at the site are available for unlimited use. Once the city well and water line are completed during the summer of 2003, all of the construction will be complete. The only remaining activity will be the annual monitoring program. By the time the next five year review is completed, six monitoring events will have occurred. At that time it should be possible to model the groundwater contamination and to determine what is happening to the plumes. From this information adjustments may be made as appropriate to the remedy. It was determined during the Feasibility Study that there would not be a significant reduction in the time necessary to clean-up the Byron plume if groundwater extraction was utilized. This could be evaluated during the next five year review.

VIII. Issues

There are no issues as a result of this review.

IX. Protectiveness Statement

The remedy selected for this Site remains protective of human health and the environment, and complies with Federal and State requirements that are legally applicable or relevant and appropriate to the Remedial Action.

X. Next Review

The next five year review is required by August 2008, five years from the date of this review.