

INTERIM REMEDIAL MEASURE WORK PLAN

**Industrial Waste Removal Action
Kozdranski Site
Wheatfield, New York**

The Goodyear Tire & Rubber Company
Akron, Ohio

October 2005

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Swiatoslav W. Kaczmar, Ph.D.
Vice President

October 2005



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1. Introduction

1.1. General

This document is the Industrial Solid Waste Removal Action (Removal Action) Work Plan for the Kozdranski Property located in the Town of Wheatfield, New York (Figure 1). The Work Plan is submitted on behalf of The Goodyear Tire & Rubber Company (Goodyear), which entered into an Order on Consent agreement with the New York State Department of Environmental Conservation (NYSDEC) effective November 4, 2004. As required by Exhibit "I" of the Order on Consent agreement, this document includes:

- A summary of the data supporting the extent of the proposed construction;
- Chronological description of the anticipated construction activities;
- Schedule for performance of the construction activities;
- Drawings and specifications, including requirements for a health and safety plan and community air monitoring plan required from the construction contractor; and
- A citizen participation plan

The data supporting the extent of the proposed construction was generated by conducting site characterization investigations in accordance with the NYSDEC-approved Site Characterization Work Plan (SCWP) (O'Brien & Gere, 2005) prepared on Goodyear's behalf in accordance with the Consent Order.

1.2. Project Objectives

The objective of the proposed construction is to remove industrial solid waste and associated contaminated soils from the Site. Investigations conducted at the Site, as summarized herein, identified industrial solid wastes in two areas on-site. As part of the removal action, these industrial solid waste materials will be excavated and disposed of off-site at an appropriately permitted non-hazardous waste landfill facility.

Upon completing the removal, representative samples of soil will be collected from the excavation floor and perimeter to assess conditions remaining at the conclusion of the waste removal. The protocols and data quality objectives for the post-excavation sampling are presented in the NYSDEC-approved Site Characterization Work Plan (SCWP) (O'Brien & Gere, 2005). Future work at the site, if any is necessary, will be based on the results of the confirmation sampling conducted after the removal action is complete.

1.3. Work Plan Organization

Section 2 presents background information regarding the Site, and summarizes the results of site investigations completed by O'Brien & Gere in accordance with the NYSDEC-approved Site Characterization Work Plan (SCWP) (O'Brien & Gere, 2005).

Section 3 provides a description of the anticipated construction activities and schedule for performance of the removal action.

Appendix A includes test pit logs and Appendix B presents photographs of the test pit excavations made as part of the site investigations completed by O'Brien & Gere. Appendix C includes the results of waste characterization analyses performed for disposal purposes. Appendix D presents technical specifications for the construction, including a specification identifying the requirements for the health and safety plan and community air monitoring plan required from the construction contractor.

2. Site Characterization

2.1. General

This Section presents a summary of the site characterization investigations completed by O'Brien & Gere on behalf of Goodyear in compliance with the SCWP (O'Brien & Gere, 2005). As described in the SCWP, the investigations included a wetland assessment and test pits explorations.

The section also includes a description of the Site and its surroundings, and information concerning site ownership and usage.

2.2. Site Description

The Kozdranski site is located on a triangular piece of property between River, Liberty, Williams, Jagow, and Witmer roads in the Town of Wheatfield, New York (Figure 1). The property is immediately south of the Niagara Mohawk right-of-way and approximately 300 feet east of the Conrail right-of-way. The Site latitude is 43° 4' 45" and its longitude is 78° 55' 15".

The Summit Park lakes are located southeast and east of the Site. Dold's Hill is located on a neighboring property south of the Site.

The surrounding properties to the north and west are utilized for agricultural purposes. Black Creek lies approximately 400 feet north of the Site, and a designated wetland (TW-26) lies approximately 1,000 feet to the west.

The May 3, 1994 Hazardous Substance Disposal Site Nomination Form prepared by the NYSDEC indicates that the nearest water supply is 2,600 ft away (Note: The Registry Site Classification Decision prepared by the NYSDEC on June 14, 1993 indicates the nearest water supply as being 3,600 ft away). The nearest identified building is 2,200 ft away. The nearest surface water is noted as being 50 ft away.

The Site is landlocked, meaning that access to public roads is not available without a right-of-way across private property held by others. The property to the west and south is presently owned by Forest City Enterprises. An agreement to access the Site across property owned by

Forest City was executed between Goodyear and FC Wheatfield, Inc. on June 21, 2005.

A dirt road (former railroad bed) also extends from Jagow Road toward the northwest corner of the Site east of the Conrail tracks and west of property owned by Forest City Enterprises that is presently used for agricultural purposes. The former railroad bed, which runs alongside the west border of the Kozdranski site, is owned by Empire State Pipeline.

2.3. Site History

Wheatfield Properties, Inc. (formerly known as Wheatfield Partnership, Inc. of 1520 Pine Avenue, Niagara Falls, NY, 14301) currently owns the property. Wheatfield Partnership, Inc. purchased the Site from the estate of Mr. Kozdranski who purchased the site on October 11, 1944 from Wheatfield Farm Association.

A July 15, 1993 letter from the NYSDEC informed Wheatfield Partnership that investigations had implicated the former owner, Mr. Kozdranski, as a hauler of wastes to the Site. The Niagara County Health Department (NCHD) first gained knowledge of the Site through a complaint filed in June 1986 by a local resident. The individual reported observing drums at the Site and also reported finding junked automobiles within the trees and brush while clearing trees in the area of Dold's Hill. The NCHD subsequently interviewed two other individuals who recalled truck traffic during a period in the mid-1970s toward the Kozdranski property.

Between 1986 and 1993, six separate investigations of the site were conducted by both the NCHD and NYSDEC. The results of the investigations conducted by the two agencies are summarized in the SCWP (O'Brien & Gere, 2005).

2.4. Site characterization investigations

Summarized below are the findings of the investigations conducted on behalf of Goodyear at the Site during 2005. These investigations were completed in accordance with the SCWP (O'Brien & Gere, 2005).

2.4.1. Initial assessment of waste extent

During the week of April 11, 2005, O'Brien & Gere inspected the site for indications of industrial waste disposal. A significant portion of the site, primarily the western and southern areas, showed signs of prior

disturbance. Indicators of waste disposal observed by the field team in these areas included various debris (e.g., drum carcasses, concrete pieces, automotive parts), irregular mounding of the ground surface, and a powdery white substance on the ground surface in some areas. The perimeters of the suspect fill areas observed by O'Brien & Gere were marked with flagging for a subsequent survey. The areas noted are consistent with the suspect areas identified and sampled by the NCHD and NYSDEC as part the six site investigations conducted between 1986 and 1993, which were summarized in the SCWP (O'Brien & Gere, 2005).

2.4.2. Wetland delineation

Concurrent with the initial assessment of waste extent, biologists from O'Brien & Gere performed a qualitative assessment of the natural vegetative communities and conducted a field survey to evaluate the presence or absence of regulated wetlands on site. Two federally regulated wetland habitats (Wetland 1 and Wetland 2) were identified on the Site. The nearest state-regulated wetland is located off-site, more than 100 ft away, as shown on Figure 2 based on a review of State wetland mapping. The wetlands were delineated in accordance with the U.S. Army Corps of Engineer's (USACE) *Wetlands Delineation Manual* (1987) and New York State Department of Environmental Conservation's (NYSDEC) *Freshwater Wetlands Delineation Manual* (1995). Other site vegetative communities observed include shrub/scrub and forested uplands.

2.4.3. Site survey

A licensed surveyor was dispatched to the Site following the wetland delineation fieldwork to survey the locations of flagging placed on site by the biologists. In addition to surveying the limits of identified wetland and waste disposal areas on site, the survey drawing included the property boundaries, identified the utility right-of-way neighboring the site, and depicted the site topography. The survey drawing prepared is included as Exhibit 1.

2.4.4. Wetland permit

As shown on Exhibit 1, one of the two suspect waste disposal areas (Spoil Area 1) is located within the physical limits of a federally regulated wetland habitat (Wetland 1). Since subsequent phases of work (e.g. test pit investigations and the waste removal action) would result in some disturbance of the wetland, it was necessary to apply for coverage under Nationwide Wetland Permit (NWP) #38.

O'Brien & Gere submitted a Joint Application for Permit for coverage under NWP #38 to the United States Army Corps of Engineers (USACE)

on June 21, 2005 on behalf of Goodyear. Goodyear subsequently received a letter dated August 8, 2005 from the USACE granting coverage under NWP #38 for site investigations (e.g. test pitting) and interim remedial measures proposed to occur in the wetland.

2.4.5. Test pit investigations

O'Brien & Gere returned to the site from September 12, 2005 until September 21, 2005 to conduct selective clearing and test pit investigations. The test pit investigations were conducted in accordance with the SCWP and February 25, 2005 letter to the NYSDEC providing clarification regarding the SCWP.

During the investigations, a total of 61 test pits were excavated (37 inside and surrounding Spoil Area 1, and 24 inside and surrounding Spoil Area 2). The approximate locations of the test pits, based on a hand-held GPS device, are presented on Figure 3. Test pit logs are provided in Appendix A and photographs of the test pits are provided in Appendix B.

At each test pit location, the excavation was completed to the depth of native clay that was generally encountered at a depth between 1½ ft and 3 ft below the surface. The length of test pits varied from as few as several feet to as long as 40 ft in an instance. As shown on Figure 3, the industrial solid waste was either not encountered in the test pits (the locations highlighted green), or waste was encountered and the edge of waste defined within the test pit limits (those highlighted blue). The locations highlighted in red on Figure 3 are those where “clean” limits were not defined. The red highlighted locations are located within the limits of the two spoil areas and the depth increment at which waste was encountered is identified on the figure.

The test pit logs in Appendix A present a summary of the observations made at each test pit location, a description of the physical characteristics and extent of waste (if any), and characteristics of the native soil. As identified above, native clay was encountered in each of the test pit excavations made. During the investigation, the clay surface was encountered most often at 1½ to 3 feet below the ground surface, and the deepest depth to clay was observed in test pit TP-1 where clay was encountered at a depth of 5 feet. Based on the observations made during the test pit investigations, the properties of the clay encountered at the Kozdranski Site are expected to be similar to those encountered during investigations by Wehran Engineering and Earth Dimensions at the neighboring site.

As indicated in a December 8, 1988 NYSDEC memorandum, Wehran Engineering and Earth Dimensions conducted investigations on the adjacent Forest City Properties site to the north, south, and east to evaluate the viability of a commercial clay mining venture with subsequent residential development in the area. As part of those investigations, 14 test pits, 14 hand auger holes, and 7 soil borings were completed over a 120-acre site according to the memorandum. The

memorandum indicates that the predominant soils encountered consist of clay of lacustrine origin. A dense glacial till was reported to underlie the lacustrine clay at depths ranging from less than 5-ft to greater than 31.5-ft below grade at the proposed lakes investigation area. Laboratory permeability testing of the lacustrine clay soils indicates permeabilities ranging between 10^{-7} to 10^{-9} cm/sec.

2.4.6. Waste characterization

In accordance with the SCWP (O'Brien & Gere, 2005), representative samples of the industrial waste observed on site were collected for waste-characterization for disposal purposes. Such analyses are required to allow Goodyear to complete the necessary waste-profile forms for subsequent waste disposal as part of the removal action. Specifically, three grab samples representative of the encountered waste were collected and a composite sample was prepared in the laboratory. The composite sample was analyzed for Toxicity Characteristic Leaching Procedure (TCLP) VOCs, & TCLP SVOCs, TCLP metals, TCLP pesticides & herbicides, polychlorinated biphenyls (PCBs), reactive sulfide and reactive cyanide, ignitability and pH. The laboratory reports presenting the results are provided in Appendix C. Based on these analyses, the industrial solid waste does not meet the characteristics of hazardous waste established by 40 CFR 261.

2.5. Conclusions

The nature and extent of industrial solid waste at the Site has been characterized to the extent necessary to design and implement a removal action based on the site characterization investigations completed by O'Brien & Gere in compliance with the SCWP (O'Brien & Gere, 2005). The results of the six investigations conducted by the NCHD and NYSDEC between 1986 and 1993, and summarized in the SCWP, are consistent with the observations of the nature and extent established by the site investigations completed by O'Brien & Gere in 2005. In summary, it is concluded that:

- Up to 3 acres of area contain industrial waste. The industrial waste is present in two distinct areas of the site.
- The industrial waste appears either on the surface or just below the surface. Where present, the industrial waste does not extend below the top surface of native clay. Clay was encountered in each test pit made on site and occurred at depths ranging between 1.5 and 5 ft based on the test pit investigation.
- Based on a December 8, 1988 NYSDEC memorandum summarizing investigations conducted by Wehran Engineering and Earth Dimensions on the neighboring site related to a clay mining venture,

the observed native clay is believed to be a lacustrine clay type. For the neighboring site, laboratory permeability testing of the lacustrine clay soils indicated permeabilities ranging between 10^{-7} to 10^{-9} cm/sec. A dense glacial till was reported by Wehran to underlie the lacustrine clay on the neighboring site. Similar conditions are expected at the Kozdranski site and would prevent impact to groundwater.

- Analysis of a composite sample comprised of three samples characteristic of the industrial solid wastes encountered indicate that the waste is non-hazardous for waste disposal purposes.
- A small area of federally regulated wetland is present on site within the limits of waste and will need to be restored following the removal action.

3. Proposed Waste Removal Action

3.1. General

The intent of the construction is to remove the industrial solid waste present on site and to dispose of the material off-site at a permitted landfill. This Section provides a description of the planned industrial waste removal actions, and presents a schedule for performance of the construction. Technical Specifications applicable to the proposed construction are provided in Appendix D.

The construction will include the following activities:

1. Further clearing, to the extent necessary, in areas of the Site where industrial waste material is observed. Figure 4 depicts areas of the site, where O'Brien & Gere observed industrial waste material during the test pit investigations, which will be addressed by the construction.
2. Removal & disposal of industrial solid waste and associated soil on the surface and to the depth of the native clay. Figure 4 indicates the approximate aerial extent to which the excavation is anticipated, based on the test pit investigations that occurred as part of the Site Characterization.
3. Representative samples will be collected for confirmation purposes from the base of the cleared areas once the industrial solid waste and associated soil is removed. As identified in the SCWP (O'Brien & Gere, 2005), the samples will be collected from the base of the excavation on an offset grid with sample locations spaced approximately 60-ft apart on the floor, providing approximately 12 samples per acre. Additionally, samples will be collected from the face of the excavation sidewalls, spaced approximately 100-ft apart. The sample grid spacing may be increased if the size of the disposal areas is discovered to be substantially larger than shown on Figure 4. However, a minimum of 3 floor and 4 perimeter confirmation samples will be collected from each excavation made, regardless of areal extent of the disposal areas.

Each confirmation soil sample collected will be analyzed in the laboratory for base/neutral and acid extractables (BNAs) including aniline, phenyl isothiocyanate, diphenylamine, 2-mercapto-benzothiazole, perylene, N,N-diphenyl-1,4-benzenediamine, benzo-

thiazole, and pheno-thiazine using USEPA Method 8270. Also, a soil sample from each location will be analyzed for volatile organic compounds (VOCs) using USEPA Method 8260. In addition to these samples, quality assurance/quality control (QA/QC) samples will be collected in the field as described in the QAPP provided with the SCWP (O'Brien & Gere, 2005). The analyses will be performed on a rush basis to minimize the amount of time the excavation is open. While awaiting the results, the open excavation will be surrounded by a temporary safety fence.

Samples will be collected from the 0 to 6-inch interval of the excavation floor at each location. Samples of the excavation sidewalls will be collected from a point where the sidewall meets the excavation floor. The samples will be collected using disposable sampling scoops. Samples collected for VOCs will be transferred directly to the appropriate laboratory sample jar. Samples for SVOCs will be homogenized in a ziplock bag, and then portioned into the appropriate sample jars for each analysis. It is anticipated that the characterization samples will be collected within 24-hours of excavation.

The location of each sample will be assigned a unique identification, which will be marked on a stake.

4. Following a review of the confirmation samples, the excavations made will be backfilled to the original topography identified on the survey drawing (Exhibit 1). The backfill will be obtained from a source off-site. Prior to accepting off-site material, the backfill will be tested to verify that it is clean. The material will be analyzed for the characteristics of hazardous waste (except toxicity characteristics) found under Subpart C of 40 CFR 261.20 including percent solids, pH, flashpoint, reactive cyanide, and sulfide. Rather than testing the off-site material for each and every constituent identified on Table 1 of 40 CFR 261, which identifies Maximum Concentration of Contaminated for the Toxicity Characteristics, the Contractor shall perform analyses for SVOCs, VOCs and metals using the methods and procedures identified in the Technical Specification – 02241 - Verification Sampling and Analyses. Contractor shall also analyze the material for PCBs/Pesticides.
5. The wetland area disturbed by the construction will be restored in accordance with the requirements of Nationwide Permit #38. Other areas of the site will be restored in accordance with the Technical Specification titled Backfill which is included in Appendix D.
6. A land surveyor will survey the excavations and prepare a Record Drawing depicting the areas cleared industrial waste material. The Record Drawing will also depict the location of confirmation samples obtained from the surface.

3.2. Removal Action Implementation

Once this work plan has been approved by the NYSDEC, Goodyear will solicit bids from contractors to complete the necessary clearing, excavation, and waste removal. At present, it is anticipated that the bid solicitation period will take between 4 to 8 weeks before an award can be made. After award, an updated project schedule will be provided to the NYSDEC detailing the benchmark events (*e.g.* clearing, excavation, sampling, post-excavation survey) for the construction.

3.3. Post-Construction Activities

A letter report will be prepared within 8 weeks of completing the construction. The letter report will summarize the removal actions completed and provide a record of the dispensation of the material disposed off-site. The letter report will also include a survey drawing depicting the areas cleared of industrial waste, and showing the locations of confirmation samples collected. The letter report will also contain recommendations regarding the need, if any, for follow-up action or investigations.

4. Citizen Participation Plan

As required by the Order on Consent, Goodyear sent a Notice of Order to the Niagara County Clerk. The purpose of the notice was to provide parties who may acquire an interest in the Site notice of the Order.

Aside from the Notice of Order, Goodyear does not presently propose further citizen participation, except as required by the separate access agreements executed between Goodyear and the respective property owners in connection with the site investigation and removal action. However, if the NYSDEC conducts public information hearings, Goodyear will be available to assist in these efforts.

The NYSDEC will be kept apprised of the project status as developments warrant. Goodyear will provide the NYSDEC an opportunity to participate in removal action activities by providing a schedule and advance notice of fieldwork. Goodyear will also continue preparation of monthly progress reports until the construction is complete. The monthly reports will be made by the 10th day of the following month in accordance with the Order.

References

NYSDEC, 1993. *Environmental Site Assessment for the Kozdranski Property, Town of Wheatfield, Niagara County, New York*, NYSDEC Region 9, June 14, 1993.

O'Brien & Gere, 2005. *Site Characterization Work Plan, Kozdranski Site, Wheatfield, New York*, O'Brien & Gere, January 2005.

December 8, 1988. NYSDEC memorandum summarizing geologic investigations conducted by Wehran Engineering and Earth Dimensions in connection with Summit Park Subdivision.