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Interim Remedial Measure Work Plan

Former Karg Brothers Tannery

Johnstown, New York

NEW YORK STATE DEPARTMENT OF
ENVIRONMENTAL CONSERVATION
ENVIRONMENTAL RESTORATION PROGRAM
PROJECT # E518022

September 2013

ARCADIS

Bruce R. Nelson, C.P.G.
Principal Geologist

Stefan Bagnato, P.G.
Project Geologist

Interim Remedial Measure Work Plan
Former Karg Brothers Tannery
Johnstown, New York
E518022

Prepared for:
City of Johnstown
33-41 E. Main Street
Johnstown, New York 12095

Prepared by:
ARCADIS of New York, Inc.
855 Route 146
Suite 210
Clifton Park
New York 12065
Tel 518 250 7300
Fax 518 250 7301

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02384015.0000

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Figures

Tables

1. Introduction

The City of Johnstown, New York (City) received a grant under the 1996 Clean Water/Clean Air Bond Act Environmental Restoration Program (ERP) to conduct a Remedial Investigation/Alternatives Analysis (RI/AA) for the Former Karg Brothers Tannery and adjacent properties in Johnstown, New York. During the RI and the previous United States Environmental Protection Agency (USEPA) Brownfields Pilot contaminants associated with tanneries (i.e. heavy metals) were detected at levels which exceeded corresponding 6 NYCRR Part 375 Soil Cleanup Objectives (SCOs) in soil samples from the former Karg Brothers Tannery property. Contaminants were detected at levels which exceeded New York State Department of Environmental Conservation (NYSDEC) Class GA Groundwater Standards in some groundwater samples from the site, however, these impacts are not necessarily from tannery operations.

The USEPA conducted a Removal Action in 2001 which removed all containerized wastes, residues, liquids, and sludges, followed by decontamination and demolition of on-site buildings. Subsequently, it had been discussed by the USEPA and the City that no further action would be required at this site as long as the remaining concrete slabs and the soil beneath them are not disturbed while the site is being redeveloped for future use. During the course of the RI, a continuous evaluation of the information and data obtained from the Site Investigation was performed in consultation with the NYSDEC. Based upon the results of the RI, the previous USEPA Brownfields Pilot, and the City's anticipated reuse plans for the site, an Interim Remedial Measure (IRM) was determined to be warranted at the site. This work plan presents the objectives and scope of the IRM that will be performed at the site and the manner in which they will be achieved.

1.1 Site Description

The site, located in the north-central portion of the City of Johnstown (Figure 1), consists of the former Karg Brothers Tannery property with an area of approximately 5.3 acres (Figure 2). While not part of the proposed IRM, 10 adjacent properties with a total land area of approximately 2.6 acres were also investigated during the RI (Figure 2). The former Karg Brothers facility was constructed in the early 1900s and operated until its closure in 1995, at which time it treated approximately 5,000 hides each day, consisting of degreasing, pickling, beaming, tanning, and finishing of cow, deer, and sheep hides (Figure 3). At present, the ground cover largely consists of the remaining concrete slabs of the former buildings that were removed during the USEPA Removal Action, with remaining areas covered by gravel, asphalt, or grass (Figures 4 and 5).

Based upon regional mapping, the area of the site is largely underlain by Ordovician shale (Fisher et al., 1970). Near surface deposits at the site are largely mapped as lacustrine sand (Cadwell et al., 1988). The soils that were encountered during RI drilling activities were generally silt and fine to medium sand with gravel and silty clay units present in several borings. Fragments of shale, consistent with regional bedrock mapping, at the refusal depths of several borings suggest that depth to bedrock at the site is within 20 feet of the surface.

1.2 Previous Sampling Results

A Phase I Environmental Liability Assessment and a Pre-Demolition Asbestos Survey were conducted at the site by O'Brien & Gere in 1996 (O'Brien & Gere, 1996). The site was investigated by Weston Solutions, Inc. of Edison, New Jersey for the USEPA in 2001, through the USEPA Removal Action Branch (RAB) for the City of Johnstown. A draft Integrated Assessment Report was submitted to the NYSDEC in June 2002 (Weston Solutions, Inc., 2002).

Soil samples collected from the former Karg Brothers Tannery property by Weston Solutions, Inc. in 2001 contained concentrations of heavy metals associated with tannery operations in excess of Part 375 Unrestricted Use SCOs, particularly near the end of East Canal Street. Additionally, volatile and semivolatile organic compounds (VOCs and SVOCs) and pesticides were detected in at least one sample at concentrations greater than Unrestricted Use SCOs.

Arsenic, chromium, copper, lead, and mercury were the most frequently detected metals at concentrations exceeding SCO is surface and subsurface soil samples during the RI. At least one of these metals was detected at concentrations greater than applicable SCOs in the majority of on-site soil samples, generally within the upper 4-5 feet. Two of the 26 soil samples collected from the Karg parcel during the RI contained VOCs at concentrations greater than the corresponding Unrestricted Use SCOs and SVOCs at concentrations greater than the corresponding Commercial SCOs.

Arsenic and isopropylbenzene were each detected in one groundwater sample at concentrations exceeding NYSDEC Class GA Groundwater Standards. Iron, manganese, and/or sodium were detected in all groundwater samples at concentrations exceeding NYSDEC Class GA Groundwater Standards.

2. Remedial Action Objective and Scope

2.1 Remedial Action Objective

The remedial action objective for the IRM is to reduce the potential for exposure to contaminants by placing a demarcation layer in areas of the site not currently covered by concrete or asphalt followed by two feet of clean soil. While not required by NYSDEC, the City will also voluntarily place two feet of clean soil over the concrete and asphalt areas to fully cover the site and bring all areas of the site to the same grade and to provide positive drainage, a necessary step for redevelopment. The IRM is designed to provide site cover to allow for restricted residential use of the site.

2.2 Remedial Action Scope

2.2.1 General

The remedial action will consist of placing a demarcation layer consisting of orange construction fencing, geotextile, and/or landscape fabric over the approximately 1.9 acres of the site currently covered by grass and/or soil, as shown on Figure 5. At least two feet of clean general fill (approximately 6,000 cubic yards) will be placed above the demarcation layer. Confirmation of soil cover thickness will be conducted in the field using a combination of survey and direct measurement techniques. While not required by NYSDEC, the City will also voluntarily at its own cost place at least two feet of clean soil (approximately 11,000 cubic yards) over the approximately 3.4 acres of the site currently covered by concrete and asphalt to fully cover the site and bring all areas of the site to the same grade to facilitate redevelopment. The soil cover will extend as close to Cayadutta Creek as allowable by floodplain development permitting.

2.2.2 Specific Work Activities

The following specific work activities will be conducted as part of the remedial action. All work and sampling activities will be conducted in accordance with the approved Remedial Investigation/Alternatives Analysis Work Plan, Quality Assurance Project Plan, and Health and Safety Plan for the site.

1. **Off-Site Fill Characterization**: Prior to mobilization, soil samples will be collected from the off-site fill source to verify that imported fill meets site use criteria established by the NYSDEC. Criteria for the site will be the Unrestricted Use or Protection of Groundwater SCOs, whichever is lower. Consistent with DER-10

guidance, the following samples will be collected for the first 1,000 cubic yards of fill utilized:

- Seven discrete samples for analysis of Target Compound List (TCL) VOCs by USEPA Method 8260;
- Two composite samples will be collected for analysis of TCL SVOCs, Target Analyte List (TAL) Metals, polychlorinated biphenyls (PCBs), and Pesticides by USEPA Methods 8270, 6010/7471, 8082, and 8081, respectively.

For each additional 1,000 cubic yard of imported fill utilized at the site, an additional two discrete VOC samples and one composite SVOC, Metals, PCBs, and Pesticide sample will be collected. At the discretion of the NYSDEC the sampling frequency may be reduced if a trend of compliance has been established.

2. **Monitoring Well Abandonment**: Prior to remedial activities, the eight existing on-site groundwater monitoring wells will be abandoned by tremie-grouting, cutting the casings two feet below grade, and removing the concrete pad and flush-mount cover. It is understood that new/replacement monitoring wells may be installed after IRM activities if required by the Record of Decision for the site.

3. **Demarcation Layer**: The areas of the site currently covered by grass and/or soil, as shown on Figure 5, will be covered by a demarcation layer consisting of orange construction fencing, geotextile and/or landscape fabric. This layer will serve to provide a visual separation between the soil cover materials and the underlying site soil.

4. **Soil Cover**: Once the demarcation layer has been placed general fill will be used to create a soil cover system at least two feet in thickness. Table 1 summarizes fill gradation requirements. General fill shall be suitable to maintain vegetative cover. Analytical testing results will be reviewed by ARCADIS to confirm that the fill material does not contain contaminants at concentrations greater than the established site criteria before being placed at the site. Erosion and sediment controls will be installed around the site prior to IRM field activities and will be maintained throughout the construction activities until final site restoration has been completed. Fill materials will be placed in 12 inch lifts on top of the

demarcation layer and compacted using mechanized equipment to minimize settling. The site will be seeded and mulched after soil is placed.

5. **Survey**: Spot topography will be measured after placement of the soil cover and compared to existing data to verify soil cover thickness.

Table 1.
Summary of Fill Gradation Requirements

Off-site General Fill	Percent Passing by Weight
4-inch	100
No. 200	0 to 20

3. Schedule and Reporting

3.1 Schedule

Figure 6 presents the anticipated Project Schedule. The NYSDEC will be informed in writing if unanticipated changes in the Schedule occur.

3.2 Reporting

An IRM Report will be prepared as a component of the forthcoming RI/AA Report and submitted to the NYSDEC upon the completion of the remedial activities. The Report will include a summary of the remedial action activities, a surveyed map showing the extent of the demarcation layer and extent and thickness of the soil cover system, and the quantities of soil used at the site.

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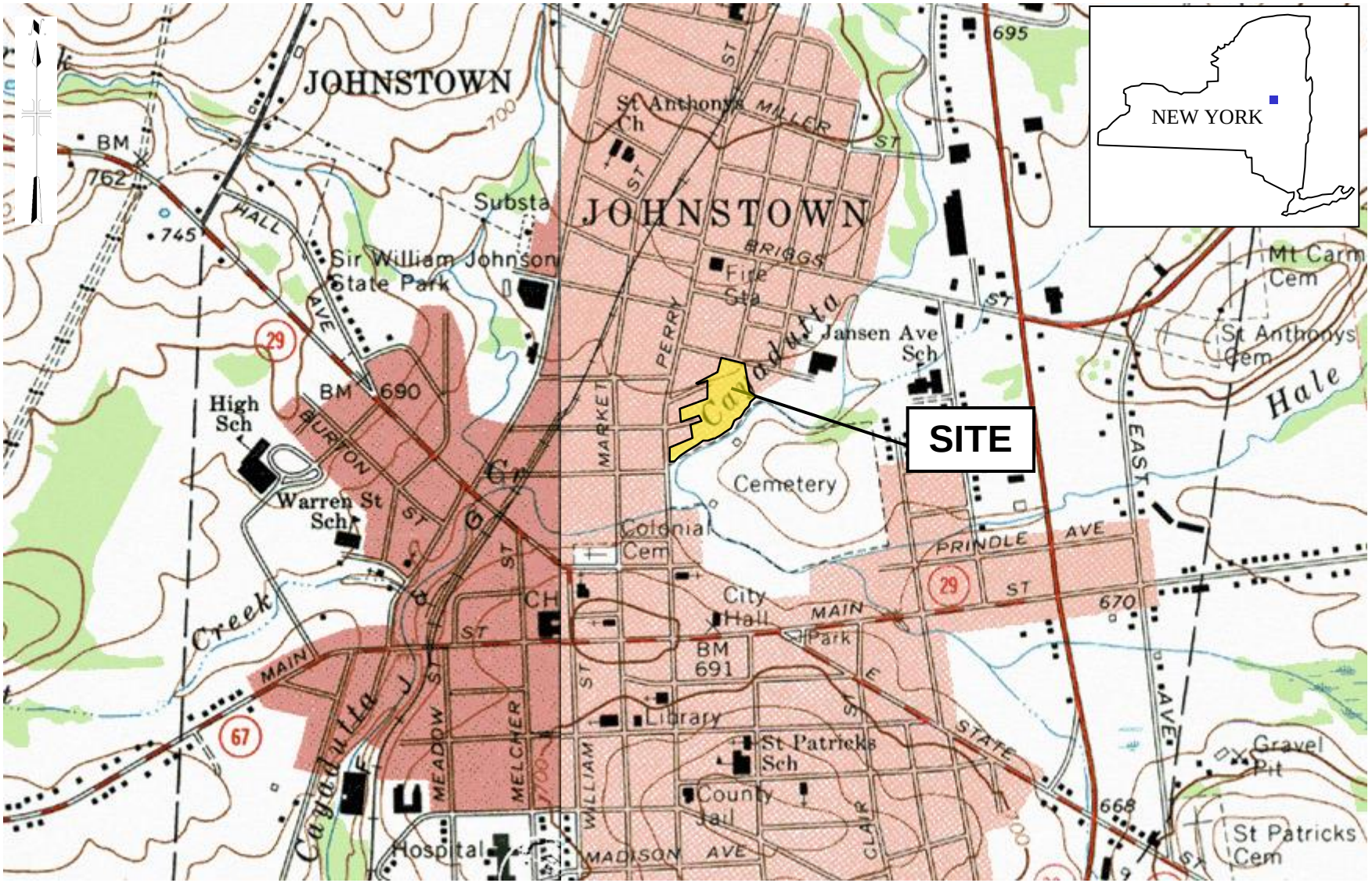
Figures



SOURCE: U.S.G.S 7.5 MIN. PECK LAKE AND GLOVERSVILLE QUADS

SCALE IN FEET

0 500 1000 2000

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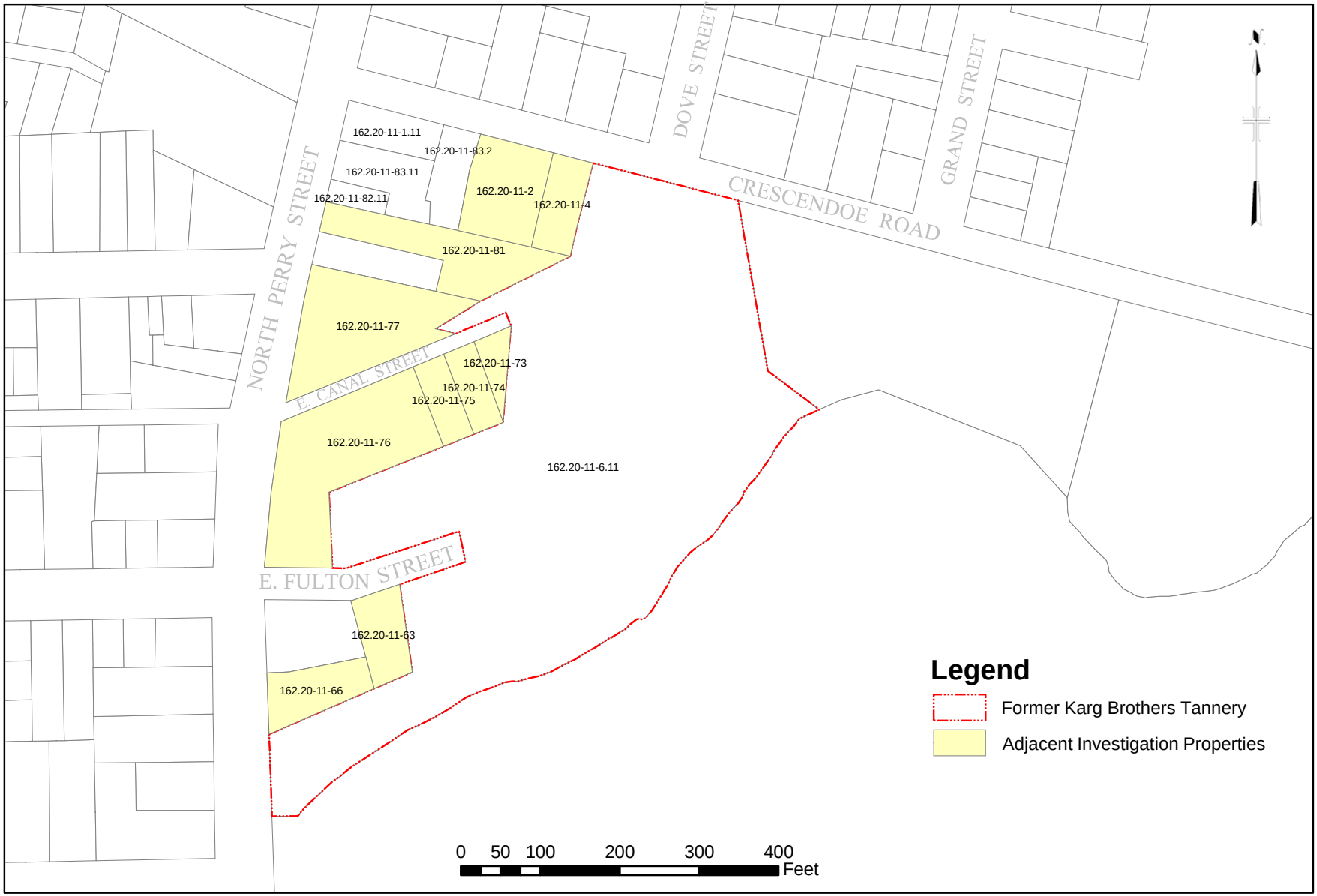
FORMER KARG BROTHERS TANNERY ERP
JOHNSTOWN, NEW YORK

IRM WORK PLAN

LOCATION MAP

MAY 2013

FIGURE 1



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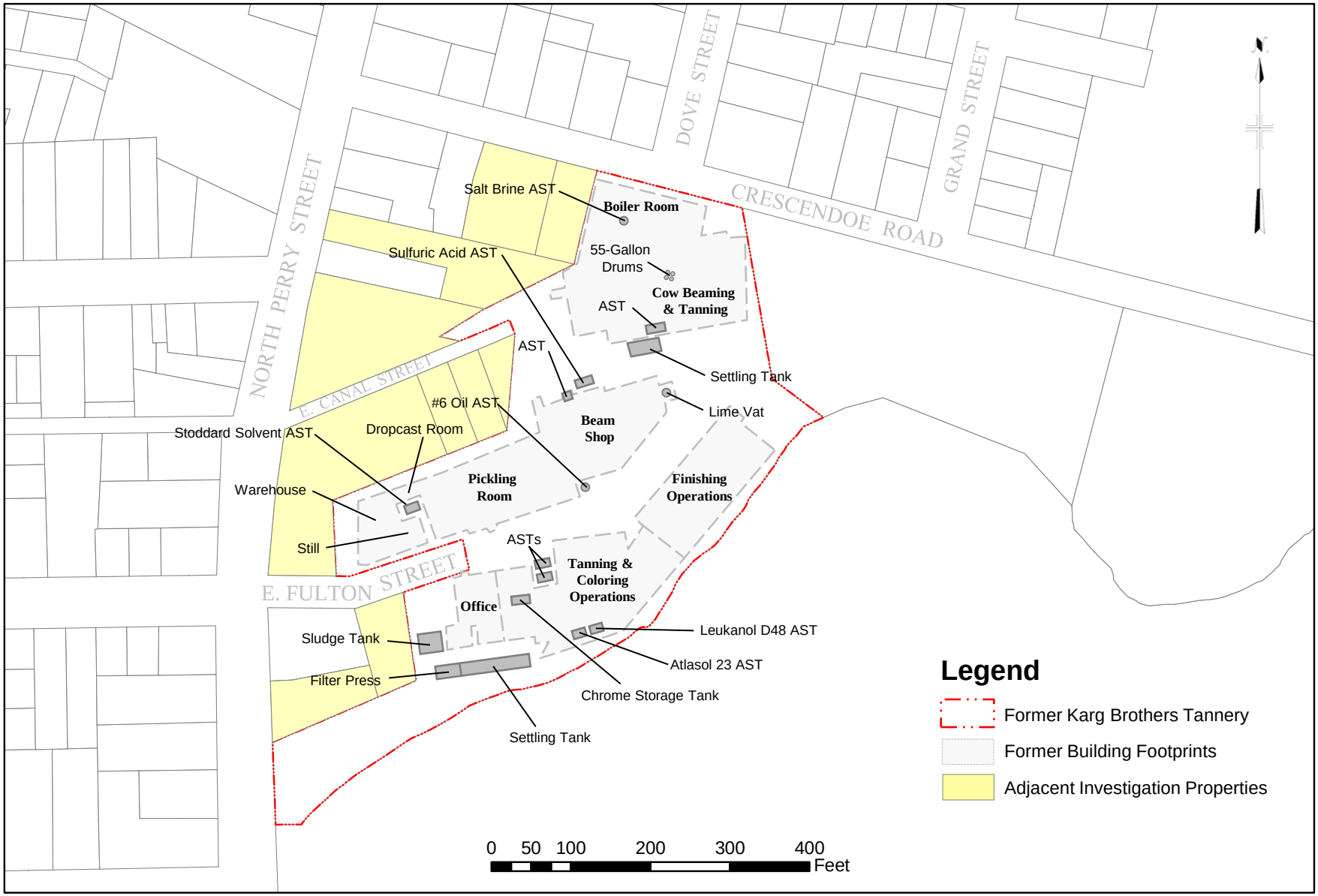
FORMER KARG BROTHERS TANNERY ERP
JOHNSTOWN, NEW YORK

IRM WORK PLAN

TAX PARCEL MAP

MAY 2013

FIGURE 2



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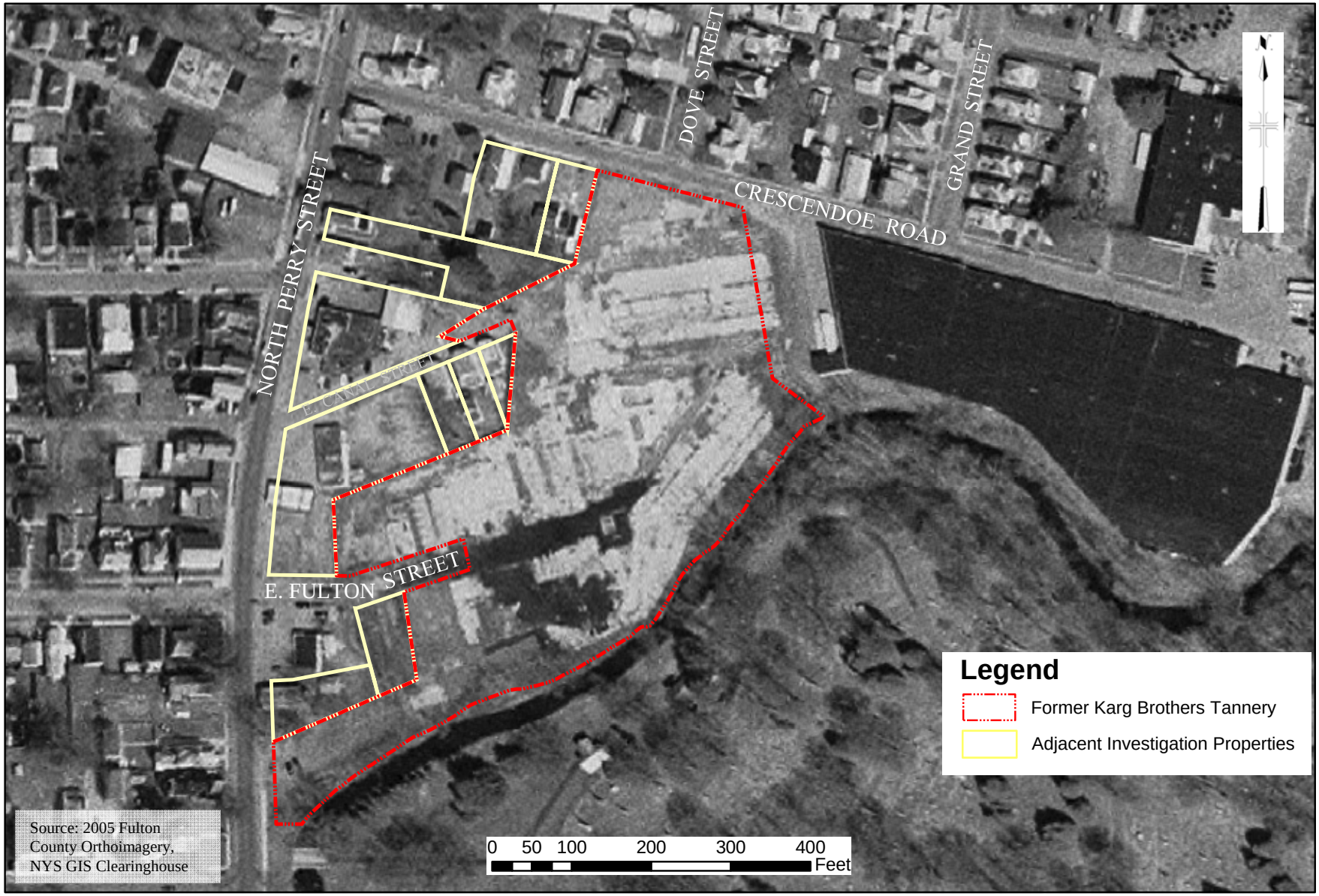
FORMER KARG BROTHERS TANNERY ERP
JOHNSTOWN, NEW YORK

IRM WORK PLAN

FORMER SITE FEATURES

MAY 2013

FIGURE 3



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FORMER KARG BROTHERS TANNERY ERP
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IRM WORK PLAN

AERIAL PHOTOGRAPH

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FIGURE 4

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REMEDIAL INVESTIGATION/ALTERNATIVES ANALYSIS

EXISTING GROUND SURFACE COVER OF KARG PARCEL

SCALE: 1"=100'

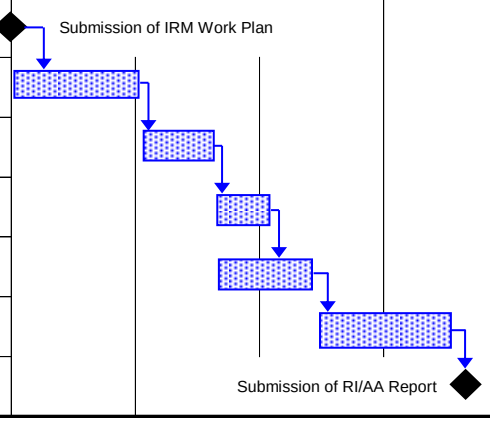
JUNE 2013

FIGURE 5

User:Hausmann Spec:PIRNIE STANDARD File:G:\ACAD\PROJ\2384015\FIGURE\AREAS OF KARG PARCEL.DWG Scale:1:1 Date:06/05/2013 Time:07:53 Layout:Blank

Figure 6
Anticipated Project Schedule
Soil Cover IRM
Former Karg Brothers Tannery ERP, Johnstown, New York

ID	Task Name
1	**Submission of IRM Work Plan**
2	**NYSDEC Review of IRM Work Plan**
3	**IRM Work Plan Revisions/Approval**
4	**Off-site Fill Characterization/City Preparations**
5	**Site Work**
9	**Report Preparation**
10	**Submission of RI/AA Report**



G:\PROJECT\2384015\File\IRM WP\Fig 6 Schedule.xls