Removal Action Work Plan

BNSF SANGAMON RIGHT-OF-WAY
CHICAGO, COOK COUNTY, ILLINOIS

March 2016

Prepared for:
BNSF Railway Company
Minneapolis, Minnesota

Prepared by:
Chicago, Illinois
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<th>Acronym</th>
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<tr>
<td>bgs</td>
<td>below ground surface</td>
</tr>
<tr>
<td>BMPs</td>
<td>best management practices</td>
</tr>
<tr>
<td>BNSF</td>
<td>BNSF Railway Company</td>
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<tr>
<td>CFR</td>
<td>Code of Federal Regulations</td>
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<td>cw</td>
<td>construction worker</td>
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<td>EQ</td>
<td>EQ Illinois, Inc.</td>
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<tr>
<td>HASP</td>
<td>health and safety plan</td>
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<td>JULIE</td>
<td>Joint Utility Locating Information for Excavators</td>
</tr>
<tr>
<td>Loewenthal</td>
<td>former Loewenthal Metals facility</td>
</tr>
<tr>
<td>mg/kg</td>
<td>milligrams per kilogram</td>
</tr>
<tr>
<td>µg/m³</td>
<td>microgram per meter cubed</td>
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<tr>
<td>mg/L</td>
<td>milligram per liter</td>
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<td>NPDES</td>
<td>National Pollution Discharge Elimination System</td>
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<td>OSHA</td>
<td>Occupational Safety and Health Administration</td>
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<td>PCBs</td>
<td>polychlorinated biphenyls</td>
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<td>QAPP</td>
<td>Quality Assurance Project Plan</td>
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<td>quality control</td>
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<td>right-of-way</td>
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<td>SROs</td>
<td>Soil Remediation Objectives</td>
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<td>SVOCs</td>
<td>semi-volatile organic compounds</td>
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<tr>
<td>TACO</td>
<td>Tiered Approach to Corrective Action Objectives</td>
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<td>TCLP</td>
<td>toxic characteristic leaching procedure</td>
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<td>TRC</td>
<td>TRC Environmental Corporation</td>
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<td>US EPA</td>
<td>United States Environmental Protection Agency</td>
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<td>VOCs</td>
<td>volatile organic compounds</td>
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<tr>
<td>Work Plan</td>
<td>Removal Action Work Plan</td>
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1.0 INTRODUCTION

On behalf of BNSF Railway Company (BNSF), TRC Environmental Corporation (TRC) prepared this Removal Action Work Plan (the RAWP) for the property along the railroad right-of-way (ROW) east of Sangamon Street between 21st Street to the south and West 16th Street to the north in Chicago, Illinois (the Site). The removal action will be conducted to address lead–impacted surface soils and characteristically hazardous waste lead-impacted areas at the Site.

The RAWP is based on the analytical results outlined in the December 1, 2014 Soil Sampling Results Letter. Prior soil investigations identified areas with lead concentrations above the most stringent Tier 1 soil remediation objectives (SROs) established in 35 Illinois Administrative Code Part 742 – Tiered Approach to Corrective Action Objectives (TACO) for industrial/commercial and residential properties, and above the characteristic hazardous waste criteria (5 milligrams per liter [mg/L] for toxic characteristic leaching procedure [TCLP] analysis). This RAWP outlines the scope to address the isolated soil areas with characteristically hazardous lead concentrations as well as the areas with lead concentrations in soil above Tier 1 TACO SROs.

1.1 Site Description

The Site is located in Section 20, Township 39N, Range 14E in Chicago, Cook County, Illinois. The Site is located in a predominantly residential area with outlying industrial properties east of the BNSF ROW (Figure 1).

The former Loewenthal Metals facility (Loewenthal) is located to the west of the BNSF ROW at the southwest corner of Cullerton Street and Sangamon Street (Figure 1). Removal activities will take place between West 18th Street to the north and West 21st Street to the south as shown on Figures 2 and 3. The characteristically hazardous lead remediation activities that will take place between West 18th Street to the north and Cullerton Street to the south as shown on Figure 3. Note, a former National Lead facility was located to the east of the BNSF ROW between West 18th Street and West 16th Street. A fence will be installed to restrict access of the BNSF ROW between West 18th Street and West 16th Street (Figure 4).

1.2 Background and Previous Sampling Results

The United States Environmental Protection Agency (US EPA) conducted subsurface investigations and remediation at Loewenthal located at 947 West Cullerton Street in Chicago, Illinois (Figure 1). Based on information obtained from the US EPA’s website, a cleanup was completed from September 30 to October 11, 2013 at this former smelting facility to remove high concentrations of lead in the soil for potential residential use.
in the future. A total of 4,800 tons of impacted soil and debris were excavated, treated with a stabilizer agent, and transported to Republic Services Newton County landfill in Indiana, where it was disposed of as non-hazardous material. The site was replaced with clean soil and seeded to prevent erosion. The site is currently vacant, unfenced and vegetated with grass.

As part of the investigation phase of the US EPA remediation project, US EPA approached BNSF to sample soil on BNSF ROW property, east of Loewenthal. It was agreed that on behalf of the US EPA, BNSF would collect the necessary soil samples at the designated US EPA sampling locations. These sampling locations are shown on Figure 2 and are designated as LM-SB-24 to LM-SB-35. The LM-series samples were collected on June 21, 2013. In addition to the US EPA sampling activities, on the same day, TRC collected three additional soil samples, one block north of the US EPA sampling locations (north of Cullerton Street) along the BNSF ROW and east of Sangamon Street. These samples are designated as GP-1 to GP-3 (Figure 3).

Based on the results of the US EPA off-site sampling, one sample location (LM-SB-24), located on City of Chicago ROW property had a TCLP lead concentration of 56 mg/L, which is above the characteristic hazardous waste limit of 5 mg/L. According to the US EPA Loewenthal website, the City of Chicago conducted its own cleanup of the area encompassing location LM-SB-24 (Figure 2). Based on the review of City of Chicago documentation, dated January 17, 2014, and provided on the US EPA website, the cleanup was conducted between September 30 and October 11, 2013 to address the characteristically hazardous lead levels in the soil. Based on the website information, the City's contractor, SET Environmental, Inc. excavated 64 cubic yards of characteristically hazardous soil and hauled it off-site for treatment and disposal. Geotextile fabric was placed on the bottom of the excavation and the excavated areas were filled with clean soil.

Based on the results of the BNSF and US EPA initial sampling, TRC completed additional soil sampling. TRC returned to the area on November 12, 2013 and advanced an additional 21 soil borings (P-1 to P-21). On October 7-8, 2014, TRC advanced an additional 28 soil borings (A-1 to A-28) to further characterize lead levels along the BNSF ROW. Samples were collected and analyzed for total and TCLP lead (Figures 1 and 2).

**Characteristic Hazardous Waste TCLP Lead Soil Results**

The following soil samples have TCLP lead results above the characteristic hazardous waste criteria:
As noted above, according to information obtained on the US EPA website for the former Loewenthal Metals, the City of Chicago conducted its own cleanup of the area around sample location LM-SB-24 due to the hazardous waste level of lead. This area is depicted on Figure 2.

Based on the analytical results, three sample locations have TCLP lead concentrations above 5 mg/L. The elevated concentrations are limited to the upper 2 feet and are horizontally defined (Figure 2).

**Total Lead Soil Results**

Based on the results of the soil samples collected and analyzed for total lead, several soil boring locations on the BNSF ROW have total lead concentrations above 800 mg/kg, the industrial/commercial ingestion SRO for lead. The sample results above 800 mg/kg are shaded in green on Figures 2 and 3. Sample results above the construction worker ingestion SRO (700 mg/kg) are depicted with a “cw” designation. Samples results identified above 400 mg/kg, the residential ingestion SRO for lead, are shaded in yellow (Figures 2 and 3).
2.0 SITE PREPARATION FOR FIELD WORK

2.1 Health and Safety

A site-specific Health and Safety Plan (HASP) has been prepared to establish general site operating procedures, safety guidelines and contingency plans for all proposed work to be performed on the Site. A copy of the HASP is included as Attachment A of this Work Plan. The HASP is dynamic in nature, and may be revised as Site conditions change. The HASP and any subsequent addenda will apply to all personnel who are involved with removal activities at the Site. All work will be conducted in compliance with applicable Occupational Safety and Health Administration (OSHA) regulations, including 29 Code of Federal Regulations (CFR) 1910 (General Industry Standards), and 29 CFR 1926 (Construction Industry Standards).

All personnel who will be directly involved in the removal activities will have received the appropriate hazardous waste site worker and e-RAILSAFE training. In addition, all personnel will be trained in general and Site-specific health and safety procedures, as well as quality assurance (QA) and quality control (QC) procedures. TRC and their subcontractors will have completed the BNSF Railway Company Contractor Orientation course prior to coming onto the Site.

All personnel who will be directly involved in the removal activities will have received the appropriate hazardous waste site worker and e-RAILSAFE training. In addition, all personnel will be trained in general and Site-specific health and safety procedures, as well as quality assurance (QA) and quality control (QC) procedures. TRC and their subcontractors will have completed the BNSF Railway Company Contractor Orientation course prior to coming onto the Site.

The ROW is not active; as such, track protection is not required.

2.2 Property Survey

Prior to mobilization and excavation activities a property survey will be conducted by a licensed surveyor and the BNSF ROW property lines and hazardous excavation areas will be delineated with stakes.

2.3 Utility Clearance

The excavation contractor will contact the Joint Utility Location Information for Excavators (JULIE) hotline and a request for the location and markings for all utilities for which JULIE is responsible. TRC will contact BNSF’s personal utility locate and on Site personnel to locate and mark all utilities located in the BNSF ROW. In addition, TRC will contract a private utility locator to ensure all boring locations are clear of underground utilities.

2.4 Hazardous Waste Profile Sampling

The hazardous waste material will either be disposed of at Peoria Disposal Company (PDC) or at EQ Illinois, Inc. (EQ). Hazardous waste profiling will be completed prior to the removal activities. This composite sample will be collected prior to excavation and disposal.
activities. In addition, an EPA-assigned hazardous waste generator number will be required prior to disposal activities.

2.5 Special Waste Profile Sampling

Although a previous disposal profile was completed for special waste along the BNSF ROW, based on discussions with Waste Management Laraway Landfill, the profile has expired. As such, this profile will be renewed. According to Waste Management, additional sampling for profiling is not required.

2.6 Site Preparation

Prior to beginning the soil excavation activities, the Site will be prepared for removal activities. A survey will be conducted identified the BNSF ROW property boundaries and the anticipated limits of the excavations will be measured and marked with stakes by the licensed surveyor. In addition, temporary fencing will be placed around the hazardous waste soil excavation limits. Work zones will be identified and delineated as well as staging areas for vehicles and equipment. Vehicles and other equipment will remain staged adjacent and west to the ROW on Sangamon Street or on the adjacent property east of the ROW. A decontamination station for equipment will be established outside the work zone but adjacent to each excavation and on BNSF ROW property. Street Sweeping will be made available if there is any dirt tracking out at the equipment access roads.

Appropriate traffic patterns for field personal and equipment will also be identified and marked in the field prior to beginning removal efforts as appropriate. Prior to mobilization to the Site, any field equipment to be used during soil removal will be cleaned. A Transportation Management Plan is included as Attachment B of this Work Plan.

2.7 Soil Erosion and Sediment Control

Erosion and sediment controls will be installed prior to any soil removal activities. The contractor must follow best management practices (BMPs) in accordance with typical conditions of a National Pollution Discharge Elimination System (NPDES) construction site erosion and storm water discharge regulations. If needed, filter fabric fences will be placed around excavations; however, fabric fences are not anticipated. No storm water conveyances, surface water bodies, or surface water drainages are present in the immediate vicinity of the soil excavation areas as such a NPDES permit is not anticipated to be required.

2.8 Air Monitoring

Air monitoring will be performed and documented throughout the entire soil removal activities due to the toxicity of lead dust. Specifics are provided in the Air Monitoring Plan included as Attachment C of this Work Plan. Air quality will be continuously monitored
with a minimum of 3 particulate meter within the work zone (2 downwind and 1 upwind) to evaluate potential worker exposure to airborne particulate concentrations. The meter will be placed in the immediate vicinity of the active excavation area. Air quality will be monitored with measurements of total particulate concentration, date, time, and wind direction recorded on air monitoring logs or in the field log book. The frequency of the monitoring will depend on the activities being conducted and the predominant wind direction, but no less than every 5 minutes. The action level for nuisance dust will be 500 micrograms per meter cubed (µg/m$^3$). The results of the air monitoring will be recorded in a log book and/or electronically recorded and kept as part of the Site documentation.

2.9 Dust Suppression

If the action level (500 µg/m$^3$) is exceeded during field activities, a stop to excavation activities will be initiated so dust control measures can be implemented. These measures may include, but are not limited to, spraying the excavations lightly with water to minimize dust emissions. Details are provided in the Fugitive Dust Control Plan included as Attachment D of this Work Plan.

2.10 Rail and Tie Removal

Prior to soil excavating, any existing rail and associated railroad ties will be removed and placed above ground, on the BNSF ROW for future disposal or recycling by BNSF. If appropriate, the rails should be cut in manageable lengths, stockpiled and as an option transported to a BNSF-owned property located no farther than 10 miles away from the Site. BNSF will not remove or replace the concrete curbing or the rails/ties or soil beneath the City of Chicago roads. Refer to the Transportation Management Plan for the staging location of the rail and ties if these materials are not directly loaded onto trucks.
3.0 REMOVAL PLAN

The following sections outline the removal actions designed to address the isolated areas with lead concentrations above the characteristically hazardous waste criteria and the non-hazardous waste criteria. Attachment G provides removal contractor’s removal and training certificates.

3.1 Hazardous Soil Excavation and Disposal

Prior to the actual soil excavation activities; the Site will be further prepared by removal of trees, as needed, signal boxes, unused power poles, and other miscellaneous structures.

Three separate areas have TCLP lead concentrations above the characteristically hazardous criteria of 5 mg/L between West 18th Street to the north, and Cullerton Street to the south. These three areas are depicted on Figure 1. The areas surround sampling locations (from south to north) P-5, GP-3 and P-19. The soil from each area will be excavated to the nearest delineation borings in each direction with concentrations below the characteristically hazardous criteria. Based on the soil analytical results, each excavation is estimated to measure approximately 20 feet by 20 feet by 2 feet bgs. No excavations will be conducted beyond BNSF ROW property boundaries (Figure 2). Excavation will be limited to an approximate 5 feet set back zone from off-site buildings, large vegetation or active underground utilities (manholes, electric, sewers, etc.). Note, the 5 foot set back zone is not anticipated to be required as part of the hazardous waste excavations.

Based on the analytical results, the excavation and disposal of hazardous soil are not expected to extend deeper than 2-feet bgs. The estimated in-place volume per excavation of characteristically hazardous soil to be excavated and disposed is approximately 30 in-place cubic yards, or approximately 45 tons. The total volume for the three excavations will be approximately 90 cubic yards, or 135 tons.

The bottom and side walls of each excavation area will be field screened with x-ray fluorescence (XRF) equipment to screen for total lead levels. However, confirmation soil samples will be collected for TCLP lead at the boundaries of the anticipated final excavation(s) limits (sidewalls and floor) for a total of five confirmation samples per excavation. Refer to Attachment E for a copy of the Sampling and Analysis Plan / Quality Assurance Project Plan (SAP/QAPP).

A demarcation fabric will be anchored down at the bottom of each of the excavation areas to prevent dust and will prevent future excavation beyond this barrier. The barrier will be marked with a Caution Excavation beyond this depth may encounter lead contaminated soil (or similar warning).
The soils excavated from these three areas will be loaded directly into plastic lined semi-trucks, tarped and transported to either PDC located in Peoria, Illinois or EQ located in Harvey, Illinois. If the soil is sent to EQ, the material will be treated to non-hazardous levels. After treatment, the non-hazardous soils will be transported to and disposed at the Waste Management Laraway Landfill located in Joliet, Illinois. In order to properly profile the material for disposal, an additional composite sample may be required. Refer to Section 2.3 above.

3.2 Non-Hazardous Soil Excavation and Disposal

Soil lead concentrations were identified above IEPA TACO Tier 1 SROs in the ROW area between West 18th Street to the north, and West 21st Street, to the south. US EPA Removal Management Levels are consistent with the TACO Tier 1 SROs. These areas are depicted on Figures 2 and 3. Based on estimates, this area contains approximately 65,967 square feet. US EPA is requiring two feet of soil be removed in the BNSF ROW area. US EPA indicated that the previous data collected has shown, in most cases, that at a two foot excavation the lead levels will be below the US EPA Removal Management Levels. Excavation will be limited to an approximate 5 feet set back zone from off-site buildings, large vegetation or active underground utilities (manholes, electric, sewers, etc.).

A demarcation fabric will be anchored down at the bottom of the excavation area to prevent dust and will prevent future excavation beyond this barrier. The barrier should be marked with a Caution Excavation beyond this depth may encounter lead contaminated soil (or similar warning).

Two feet of material will be removed from the ROW area, loaded directly onto semi-trucks and disposed of as a special waste material at the Waste Management Laraway Landfill located in Joliet, Illinois. If appropriate, the soil may be stockpiled prior to loading. Any stockpile will be tarped, as necessary to limit dust. The estimated in-place volume of special waste soil to be excavated and disposed is approximately 4,800 in-place cubic yards or approximately 7,200 tons.

3.3 Decontamination

Heavy equipment (i.e. excavator and/or backhoe) utilized for excavation activities will be visually inspected prior to, and at the completion of each excavation area (hazardous and non-hazardous areas). If the tracks on the heavy equipment become soiled, the driver will physically clean the tracks of soil with a shovel and place the material within the last truck-load of soil going off for treatment and disposal prior to leaving the excavation area and the Site. The driver of heavy equipment will inspect his/her vehicle for loose soil hanging off the truck, truck tracks, and bucket prior to leaving an excavation area.
Decontamination water, if generated will be mixed to the impacted soil and placed within the last truck-load of soil going off for treatment and disposal.

Trucks and equipment will use the equipment access road to the excavation area. Trucks will be lined, tarped and inspected prior to leaving the excavation area. Street sweeping shall be made available to keep streets and curbs clean in the exit of the haul road and beyond.

A truck route has been prepared and adhered to for the drivers to minimize travel on the side roads near the community and will bypass the local grammar school two blocks to the east and south of the BNSF ROW. Main City of Chicago roads will be utilized with proper weight limits and overhead clearances to the main interstate roads. Refer to the Transportation Management Plan included as Attachment B.

3.4 Site Restoration

Prior to backfilling the soil excavations, a demarcation barrier indicating caution “Do Not Dig” or other demarcation will be placed at 2 foot below grade or at the final depth of excavation. The excavations will be backfilled to grade and compacted, if necessary. Backfill will consist of at least 6 inches of topsoil at the surface. Backfill below the topsoil may consist of crushed stone or topsoil depending on the depth of the excavation.

3.5 Fence Installation South of 16th Street and North of 18th Street

An 8-foot high (2 by 9 gage) chain-link fence with wind screen, and a 1-5/8 inch top rail will be constructed along the ROW corridor south of the bridge at 16th Street and north of West 18th Street (Figure 3). The length of fence and/or gate is expected to extend approximately 100 feet on the south side of 16th Street connecting to the west BNSF property line to a concrete piling to the east. The fence is expected to extend approximately 38 feet on the north side of West 18th Street connecting already existing fence. Fence posts will be dug to 3 feet bgs and emplaced in concrete. Three strands of barbed wire will be installed at the top of the fence. The soil material removed to install the fence posts will be placed inside the fence.
4.0 REPORTING

TRC will oversee the excavation subcontractor and document these activities. A weekly summary of work completed and work planned will be prepared and presented and discussed with US EPA and BNSF. The documentation will include manifests, dimensions of the soil excavations, volumes of soil removed, and excavation procedures and air monitoring data. Site activities will be recorded in a field log book and on appropriate log forms, as needed. Photographic documentation of the excavation activities and air monitoring results will also be documented by TRC. Upon completion of the excavation activities, a Removal Action Completion Report will be prepared for BNSF and submitted to US EPA, as required under the Consent Order.
5.0 SCHEDULE

A schedule for completion shall be prepared with major milestones noted and projected time frames. Weekly meetings will be held on site to go over the completed and projected tasks.

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<th>Estimated Schedule Start or Due</th>
<th>Estimated Time to Complete (Working Days)</th>
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<td>Completed</td>
<td>TRC-selected surveyor</td>
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<td>Fence Installation (16th Street Bridge – 18th Street)</td>
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<td>Contractor/TRC</td>
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<td>Composite Sampling for Hazardous Waste Profiling</td>
<td>March 2016</td>
<td>1 day</td>
<td>TRC</td>
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<td>Issue Invitation to Bid / Request for Proposals (RFP)</td>
<td>March 2016</td>
<td>10 working days</td>
<td>BNSF / TRC</td>
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<td>Profiling Hazardous and Nonhazardous Disposal Paperwork</td>
<td>March 2016</td>
<td>10 working days</td>
<td>TRC</td>
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<td>Contractor Mandatory Pre-Bid Meeting</td>
<td>April 2016</td>
<td>1 day</td>
<td>Contractors</td>
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<tr>
<td>Prepare RFP Addenda / Respond to Contractor Questions</td>
<td>April 2016</td>
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<td>BNSF / TRC</td>
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<td>Contractor Notice of Award</td>
<td>May 2016</td>
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<td>City of Chicago Permitting</td>
<td>May 2016</td>
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<td>Staking of Excavation and BNSF-ROW Property Boundaries</td>
<td>May 2016</td>
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<td>TRC-selected surveyor</td>
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<td>Mobilization for Work to Begin at Site</td>
<td>June 2016</td>
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<td>Removal of Existing Out-Of-Service Railroad Tracks / Ties</td>
<td>June 2016</td>
<td>10 days</td>
<td>Contractor</td>
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<td>Removal and Disposal of 90 CY of Hazardous Soil</td>
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<td>Confirmation Soil Sampling and Laboratory Analysis</td>
<td>June 2016</td>
<td>10 day TAT (lab turnaround time)</td>
<td>TRC/Laboratory</td>
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<td>Installation of Fencing on Northern Portion of Site</td>
<td>June 2016</td>
<td>5 days</td>
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<tr>
<td>Removal and Disposal of 4,000 CY of Nonhazardous Soil</td>
<td>June – July 2016</td>
<td>20 days</td>
<td>Contractor with TRC oversight</td>
</tr>
<tr>
<td>Placement of Demarcation Barrier and Backfilling (begins concurrent to excavation)</td>
<td>July 2016</td>
<td>5 days (beyond excavation completion)</td>
<td>Contractor with TRC oversight</td>
</tr>
<tr>
<td>Restoration of Excavated Areas (grading and seeding; begins concurrent to earthwork)</td>
<td>July 2016</td>
<td>5 days (beyond earthwork completion)</td>
<td>Contractor with TRC oversight</td>
</tr>
<tr>
<td>Event</td>
<td>Estimated Schedule Start or Due</td>
<td>Estimated Time to Complete (Working Days)</td>
<td>Responsible Party</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>---------------------------------</td>
<td>------------------------------------------</td>
<td>-----------------------------------</td>
</tr>
<tr>
<td>Installation and/or Repair of Public Infrastructure, if required (e.g., roadways, curb and gutter, and sidewalk)</td>
<td>July - August 2016</td>
<td>TBD</td>
<td>Contractor with TRC oversite</td>
</tr>
<tr>
<td>Data validation and evaluation</td>
<td>July - August 2016</td>
<td>30 days</td>
<td>TRC</td>
</tr>
<tr>
<td>Reporting</td>
<td>August - October 2016</td>
<td>60 days</td>
<td>TRC</td>
</tr>
</tbody>
</table>

*Note:*

*The schedule is dependent on joint coordination efforts with the City of Chicago.*
6.0 REFERENCES


FIGURES
FIGURE 1
SITE LOCATION MAP

SOURCE: USGS 7.5 MINUTE SERIES TOPOGRAPHIC MAP, CHICAGO LOOP AND ENGELWOOD QUADRANGLES


SCALE IN FEET
1" = 2,000'

PROJECT:
BNSF
RIGHT-OF-WAY SAMPLING EAST OF LOEWENTHAL METALS
CHICAGO, COOK COUNTY, ILLINOIS

DRAWN BY:
S. ALBERTS

APPROVED BY:
L. MEAGHER

PROJ. NO.
230807

FILE NO.
230807-04.dwg

DATE:
DECEMBER 2015

FILE LOCATION:
File Name:
Plot Information:
Layout Name:
FIGURE 1
230807-04

S:\PROJECTS\BNSF\Sangamon ROW Loewental Metals Chicago\Cad Files - 230807

NONE

ALBERTS, SCOTT

----

ANSI A (8.50 X 11.00 INCHES)

December 7, 2015

0.3869

K:\AUTOCAD_CONFIG\PLOTTERS\PLOT STYLES\RMT COLOR.CTB

SOURCE: USGS 7.5 MINUTE SERIES TOPOGRAPHIC MAP, CHICAGO LOOP AND ENGELWOOD QUADRANGLES
**Figure 3**

**REMOVAL AREA / SAMPLING RESULTS**

**CULLERTON STREET TO WEST 18TH STREET**

**BNSF RIGHT-OF-WAY SAMPLING EAST OF LOEWENTHAL METALS**

**CHICAGO, COOK COUNTY, ILLINOIS**

**US EPA ESTIMATED SAMPLE LOCATIONS (JUNE 21, 2013)**

**BNSF SAMPLE LOCATIONS (JUNE 21, 2013)**

**BNSF SAMPLE LOCATIONS (JUNE 21, 2013)**

**SANGAMON ST**

**W 18TH ST**

**W 18TH PL**

**W 19TH ST**

**W 19TH PL**

**US EPA ESTIMATED SAMPLE LOCATIONS (JUNE 21, 2013)**

**BNSF SAMPLE LOCATIONS (JUNE 21, 2013)**

**BNSF SAMPLE LOCATIONS (JUNE 21, 2013)**

**LEGEND:**

- Characteristically Hazardous Waste Area
- BNSF Property Boundary (Per Terra Engineering Survey 2016)
- Estimated area to be excavated, a 2 to 5 foot setback zone adjacent to buildings, roads, and other structures; will be observed to prevent damage to these structures during excavation activities.

**US EPA ESTIMATED SAMPLE LOCATIONS (JUNE 21, 2013)**

**BNSF SAMPLE LOCATIONS (JUNE 21, 2013)**

**BNSF SAMPLE LOCATIONS (JUNE 21, 2013)**

**TRC COLOR.CTB**

**REMOVAL AREA / SAMPLING RESULTS**

**CULLERTON STREET TO WEST 18TH STREET**

**BNSF RIGHT-OF-WAY SAMPLING EAST OF LOEWENTHAL METALS**

**CHICAGO, COOK COUNTY, ILLINOIS**

**US EPA ESTIMATED SAMPLE LOCATIONS (JUNE 21, 2013)**

**BNSF SAMPLE LOCATIONS (JUNE 21, 2013)**

**BNSF SAMPLE LOCATIONS (JUNE 21, 2013)**

**LEGEND:**

- Characteristically Hazardous Waste Area
- BNSF Property Boundary (Per Terra Engineering Survey 2016)
- Estimated area to be excavated, a 2 to 5 foot setback zone adjacent to buildings, roads, and other structures; will be observed to prevent damage to these structures during excavation activities.
LEGEND:

- WATER MANHOLE
- TELEPHONE MANHOLE
- STORM SEWER MANHOLE
- WASTE WATER MANHOLE
- GAS MANHOLE
- CABLE MANHOLE
- ELECTRIC MANHOLE
- UTILITY POLE
- LIGHT POLE
- POWERLINE CROSSING
- FIRE HYDRANT
- DATE POST

EXISTING FENCE
RAILROAD TRACKS
OVERHEAD ELECTRIC
OVERHEAD CABLE
PLUMBING PIPES
CONSTRUCTION
EXISTING WARNING ZONE

FENCE TO EXTEND ACROSS AND MOUNT INTO CONCRETE BRIDGE (2 8' FOOT GATE)

FENCE TO TIE INTO EXISTING FENCES ON ADJACENT PROPERTIES (NO GATE)

EXISTING WARNING ZONE

FILE DRAWING IS NOT FOR CONSTRUCTION.

INFORMATION CONFIDENTIAL:
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NOT FOR CONSTRUCTION

230807-01(for bid).dwg

FILE LOCATION: S:\PROJECTS\BNSF\Sangamon ROW Loewental Metals Chicago\Cad Files - 230807\Excavation and Construction\230807-01(for bid).dwg

REV. DATE BY APP DESCRIPTION

Plotted: 3/8/2016 9:50:14 AM By: ALBERTS, SCOTT

BNSF RAILWAY
SANGAMON RIGHT OF WAY EXCAVATION
CHICAGO, COOK COUNTY, ILLINOIS
FENCE LOCATION MAP -
WEST 18TH STREET TO WEST 18TH STREET
ATTACHMENT A

Site-Specific Health and Safety Plan
ATTACHMENT B

Transportation Management Plan
ATTACHMENT C

Fugitive Dust Control Plan
ATTACHMENT D

Air Monitoring Plan
ATTACHMENT E

Sampling and Analysis / Quality Assurance Project Plan
ATTACHMENT F

Schedule for Completion with Major Milestones
ATTACHMENT G

Selection of Removal Contractor with Certifications and Training Certificates