

**WORK PLAN
FOR
OIL (I.E., GASOLINE) RECOVERY AND
CONTAINMENT**

**REMEDICATION FOR ALL IMPACTED
AREAS**

**REMEDICATION FOR DOWNSTREAM
IMPACTED AREAS**

AND

**WASTE TREATMENT,
TRANSPORTATION AND DISPOSAL**

**AT:
105 MAPLE STREET
VILLAGE OF WELLINGTON
LORAIN COUNTY, OHIO**

**PREPARED FOR:
SUNOCO LOGISTICS PARTNERS, LP and
SUN PIPELINE COMPANY**

**PREPARED BY:
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**PURSUANT TO:
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5**

**ORDER FOR COMPLIANCE UNDER SECTION 311(c) and (e)
OF THE
CLEAN WATER ACT
DOCKET NO: V-W-11.C-987**

JANUARY 2012

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1.0 INTRODUCTION

1.1 General

This Work Plan complies with items numbers 5 through 8 under Section VI, paragraph 35 of United States Environmental Protection Agency (EPA), Region 5, Order for Compliance (Order) Under Section 311(c) and (e) of the Clean Water Act, Docket No: V-W-11.C-987 issued to Sunoco Logistics Partners, L.P. and Sun Pipeline Company (Respondent), effective date January 17, 2012. More specifically, this Work Plan describes planned removal activities to be performed after approximately 6:00 p.m. Eastern Standard Time (EST) on Saturday, January 21, 2012 at the facility located at or about State Route 58 and Maple Street in Wellington, Ohio as shown on Figure 1 (Site). Because removal activities are in progress and to allow time to assemble information for Work Plan submittal, unless otherwise noted, 6:00 p.m. EST January 21, 2012 was selected as the cut off time for reporting purposes. This time corresponds with the end of Respondent's daytime work shift.

The Order requires performance of removal actions in connection with the release of oil (i.e., gasoline) from an 8-inch underground gasoline pipeline owned and operated by Respondent located at the Site in accordance with the National Contingency Plan (NCP). This Work Plan was prepared in conjunction with and incorporates by reference the following documents also required by the Section VI, paragraph 35 of the Order:

1. Report of Completion of the Removal and Restoration Activities at a Facility Located at or About State Route 58 and Maple Street in Wellington, Ohio Required by Section VI, Paragraph 34 of the Order;
2. Updated Health and Safety Plan (HASP);
3. Field Sampling and Analysis Plan (FSAP); and
4. Quality Assurance Project Plan (QAPP).

The scope of this Work Plan is for removal actions in connection with the release to mitigate or prevent a substantial threat of a discharge of oil. The Work Plan is designed to establish a clear approach for removal actions, yet be flexible, and allow for adaptation to changing field observations and conditions. EPA will be promptly informed of such changes prior to implementation as outlined in Section 7.0. Furthermore, Respondent will provide detailed documentation to EPA to comply with this Order for removal actions after 6:00 p.m. EST on

Saturday, January 21, 2012 as part of reports required by Section VI, paragraph 34, items h) and j) of the Order and progress reports required by Section VI, paragraph 37 of the Order.

Respondent has been working cooperatively to mitigate and stabilize the release since it occurred and has developed these plans in a short time frame based on activities already performed and reasonably anticipated future activities to be performed under the Order. This project has been very fluid during the early stages of the response and plans may change based upon further information learned in the future. Respondent will continue to cooperate and communicate with EPA as work at the Site continues and appreciates EPA's understanding of this needed flexibility.

Once these plans are implemented and removal actions are complete, further Site characterization and remedial activities may be warranted. Such further Site characterization and remedial activities are not part of the Order and, therefore, are not addressed in this Work Plan. The Respondent's understanding is that these Site characterizations and remedial activities will be under Ohio EPA oversight. At this time and at Ohio EPA's request, Respondent is preparing a work plan for submittal to Ohio EPA for monitoring of the excavation area and White Ditch.

1.2 Background

The release occurred at approximately 11:02 p.m. Eastern Standard Time on January 12, 2012. After discovery of the pipe rupture, Respondent shut off flow to the 8-inch pipeline as soon as possible. O. An Initial Pollution Incident Report (IPIR) was filed with Ohio EPA, Division of Emergency and Remedial Response and Spill ID Number 1201-47-0099/0 was assigned. The Wellington Fire Department responded to the scene on January 12, 2012 and constructed a dam to control the flow of gasoline from entering the White ditch. On January 13, 2012, Respondent and EPA began managing containment and recovery through the establishment of a Unified Command System. Release stabilization and mitigation efforts have been continuous and are described in detail in the "Report of Completion of the Removal and Restoration Activities at a Facility Located at or About State Route 58 and Maple Street in Wellington, Ohio Required by Section VI, Paragraph 34 of the Order". As such, this Work Plan builds on the work that has already been accomplished under the Unified command and cooperatively with Respondents and their representatives. Additionally, because work is continuing to progress

under EPA oversight while this Work Plan is being prepared, the status of activities described herein may change.

2.0 OIL RECOVERY AND CONTAINMENT PLAN

2.1 Oil Recovery and Containment Methods

After discovery of the release, Respondent deployed and has maintained the appropriate recovery equipment and containment devices to recover gasoline and contain its migration. As described in the "Report of Completion of the Removal and Restoration Activities at a Facility Located at or About State Route 58 and Maple Street in Wellington, Ohio Required by Section VI, Paragraph 34 of the Order", containment devices included construction of underflow dams and placement of absorbent booms and pads in White Ditch, installation of interceptor trenches and soil berms in Zone 1 and Zone 2 to prevent gasoline migration to White Ditch and identification of and elimination of preferential migration pathways (i.e. clay tiles, storm sewer) to White Ditch. Gasoline and gasoline-impacted water was recovered in White Ditch on the upstream side of the underflow dams and absorbent booms, and from the interceptor trenches, Zone 2 excavation, and the 18-inch storm sewer drain line using vacuum trucks or pumped to frac tanks on the Site, as needed. In addition, gasoline was recovered from the excavation around the pipeline break using vacuum trucks. Absorbent booms and pads were inspected and replaced on an as-needed basis.

At the request of the Ohio EPA, Respondent installed a series of aeration tubes along White Ditch to sparge impacted surface water. Also, at the request of Ohio EPA, a series of high volume trash pumps were used to pump water from White Ditch and discharge the water back into the ditch to further aerate and volatilize impacted surface water.

Respondent will continue to use these techniques to recover gasoline and contain its migration during the removal actions, as needed, in cooperation with EPA. Continuation of these techniques following removal actions will be evaluated with Ohio EPA as site characterization activities continue after removal actions are complete under this Order.

2.2 Quantity and Location Tracking and Reporting

Since the release was discovered on January 12, 2012, Respondent has been tracking and recording the volume of recovered gasoline during the response, including but not limited to gasoline, gasoline impacted water and other gasoline impacted materials (e.g., booms and debris) and reporting estimates daily to EPA to comply with Section VI, paragraph 34, item h) of the Order. Respondent will continue to comply with this daily reporting requirement and will

summarize recovered volumes as part of reports to comply with Section VI, paragraph 34, item j) of the Order and progress reports to comply with Section VI, paragraph 37 of the Order.

3.0 REMEDIATION PLAN FOR ALL IMPACTED AREAS

3.1 Definition of Impacted Areas

The Impacted Area, that is the subject of this Order, consists of impact areas A through H within Zone 1, and the Zone 2 Excavation, as shown on Figure 2. These are irregularly shaped areas located in the Village of Wellington, Ohio approximately 650 feet northeast of the intersection of State Route 58 and Maple Street. The initial gasoline release occurred at the southwest area of Impact Area 1 and the gasoline migrated toward the north / northeast via surface and shallow subsurface flow. Subsurface drainage tiles were also present and created preferential migration pathways within the Impacted Area. These drainage tiles have been located and plugged to prevent additional gasoline migration. The Table below gives basic information about the two impact areas.

Surface Impact Area	Approximate Area (sq ft)	Approximate Centroid Location		Soil types	Lorain County Soil Status	Vegetation/Land Use
		Latitude	Longitude			
Areas A through H	127,920	41.179	-82.215	Mahoning-Tiro silt loams, 2 to 6 % slope; Fitchville silt loam, 0 to 2 % slope	Nonhydryc; Nonhydryc	Upland old field/scrub shrub
Zone 2 Excavation	10,743	41.180	-82.214	Fitchville silt loam, 0 to 2 % slope	Nonhydryc	Upland agricultural field

Area A through H is dominated by the Mahoning-Tiro silt loams, 2 to 6 % slope soil type in its western and central portions, and by the Fitchville silt loam, 0 to 2 % slope soil type in the eastern portion. Both soil types are classified as Nonhydryc by the Natural Resource Conservation Service (NRCS). The Zone 2 Excavation is comprised entirely of the Fitchville silt loam, 0 to 2 % slope soil type.

- Mahoning is a gently sloping, very deep, somewhat poorly drained soil. Typically the surface layer is silt loam about 9 inches thick. The surface layer has a moderate content of organic matter. The slowest permeability is very slow. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is

at 12 inches. The soil contains a maximum amount of 15 percent calcium carbonate.

- Tiro is a gently sloping, very deep, somewhat poorly drained soil. Typically the surface layer is silt loam about 12 inches thick. The surface layer has a moderate content of organic matter. The slowest permeability is slow. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 12 inches. The soil contains a maximum amount of 15 percent calcium carbonate. This soil is not hydric.
- Fitchville is a nearly level, very deep, somewhat poorly drained soil. Typically the surface layer is silt loam about 10 inches thick. The surface layer has a moderate content of organic matter. The slowest permeability is moderately slow. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 12 inches. The soil contains a maximum amount of 5 percent calcium carbonate.

3.2 Remediation Plan for Impacted Areas

The removal activities for Impacted Areas as defined in Section 3.1 have been successful and are nearing completion. As described in the “Report of Completion of the Removal and Restoration Activities at a Facility Located at or About State Route 58 and Maple Street in Wellington, Ohio Required by Section VI, Paragraph 34 of the Order”, soils in the Impacted Areas have been excavated in accordance with a soils excavation plan approved by Unified Command, stored in roll-off boxes or stockpiled on-site, and are in the process of being disposed. The limits of remaining excavation are continuing to be defined and Respondent is continuing to excavate soils to those limits. If additional gasoline is observed in the Impacted Area, Respondent will perform additional gasoline removal and soil excavation.

At this time and at Ohio EPA’s request, Respondent is preparing a work plan for submittal to Ohio EPA for monitoring of the excavation area and White Ditch . This plan, which is part of site characterization and not part of this Order, will include piezometer installation and Membrane Interface Probing (MIP) to help characterize the Impacted Areas. The results of this monitoring, combined with ongoing visual observations to detect gasoline in the Impacted Area, will be used to work cooperatively with EPA to determine when removal activities under this Order are complete. Restoration of the Impacted Area will likely consist of backfilling excavated areas sometime in the future, which will be performed outside of the Order in cooperation with Ohio EPA.

4.0 REMEDIATION PLAN FOR DOWNSTREAM IMPACTED AREAS

4.1 Definition of Downstream Impacted Areas

The Downstream Impacted Area, that is subject to this Order, is defined as an approximately 250-foot reach of an unnamed tributary (UT) to West Branch Black River located between approximately 275 feet and 525 feet north of Maple St., Wellington, OH. This area is in Zone 1 and a portion of Zone 2 as shown on Figure 2. The release of gasoline to the UT, known locally as White Ditch, occurred primarily in this reach. As described in the "Report of Completion of the Removal and Restoration Activities at a Facility Located at or About State Route 58 and Maple Street in Wellington, Ohio Required by Section VI, Paragraph 34 of the Order", removal actions to date in the Downstream Impacted Area have focused on containing and removing gasoline entering White Ditch. These removal actions have been successful and will continue as described in Section 4.2, as needed, based on visual monitoring of the embankments and water surface of White Ditch. Future assessment and potential remediation of White Ditch is outside the scope of this Order and, based on Respondent's understanding, will be performed under the direction of Ohio EPA.

White Ditch flows south to north and is within the Lake Erie drainage basin. White Ditch within the Downstream Impacted Area has been hydrologically modified and maintained as an overwide trapezoidal cross section corresponding to a Rosgen Type F channel type. There is no access to a one-to-two year floodplain. The ditch is estimated to be capable of containing at least a 25-year flow event. Width at the Ordinary High Water Mark is estimated at 14 to 16 feet. There is no woody riparian vegetation and thus no shade. Fluvial morphology is poorly developed with no distinct riffles or pools and a sinuosity of 1.0 (i.e., channel length=valley length). Substrates within the ditch consist predominantly of silt and leaf pack, with some muck present. There are no apparent larger mineral substrates such as gravel or cobble. The ditch bottom is heavily vegetated with narrowleaf cattail (*Typha angustifolia*), an invasive aquatic plant species typical of disturbed and permanently inundated, or saturated wetland areas.

White Ditch within the downstream impacted area has a catchment area of approximately 0.83 square miles or 531 acres (USGS StreamStats¹, which is located entirely within residential and commercial areas of Wellington, OH. The small catchment area and water depth under 40 cm indicates that White Ditch within the downstream impacted area is an Ohio Primary Headwater

¹ http://streamstatsags.cr.usgs.gov/oh_ss/default.aspx

Habitat (PHWH) stream. White Ditch has not been assigned an aquatic life use designation in Ohio rule (OAC 3745-1). The downstream impacted area was evaluated using the Ohio EPA Headwater Habitat Evaluation Index (HHEI; version 3.0, January 2012). The downstream impacted area scored a 64 on the HHEI identifying it as a Modified Class II PHWH, which constitutes the ditch's existing use.

4.2 Remediation Plan for Downstream Impacted Areas

The removal activities for Downstream Impacted Areas as defined in Section 4.1 have been successful and are essentially complete. Gasoline is no longer entering White Ditch. Only small isolated pockets of gasoline are found in White Ditch. These areas are contained by absorbent booms and pads. As described in the "Report of Completion of the Removal and Restoration Activities at a Facility Located at or About State Route 58 and Maple Street in Wellington, Ohio Required by Section VI, Paragraph 34 of the Order", underflow dams, absorbent booms, and sparging stations remain deployed in White Ditch and the Black River. If additional gasoline is observed in White Ditch, these measures will be used in conjunction with the deployment of absorbent booms and pads, vac trucks or pumps to remove the gasoline. Respondent will continue to use these techniques to recover gasoline and contain its migration during the removal actions, as needed, in cooperation with EPA. Continuation of these techniques following removal actions will be evaluated with Ohio EPA as site characterization activities continue after removal actions are complete under this Order.

At this time and at Ohio EPA's request, Respondent is preparing a work plan for submittal to Ohio EPA for monitoring of the excavation area and White Ditch. This plan, which is part of site characterization and not part of this Order, will include visual monitoring of the embankments and water surface of White Ditch. Additionally, Respondent has an Ohio EPA approved work plan that is currently being implemented for sediment and creek bank sampling in White Ditch. The work plan was prepared based on Ohio EPA's recommendation for creek bank sampling, and based on methods and procedures listed in the Ohio EPA Division of Surface Water Sediment Sampling Guide and Methodologies, 2nd Edition (November 2001). Submerged sediment samples will be collected approximately every 100 yards from over a total distance of 1,500 feet in portions of Zone 1 and 2. Emergent bank sediment samples will also be collected from the toe of the bank and half way up the bank at approximately 100 yard intervals over the same 1,500 feet of ditch. A portion of the sampling suite will be submitted to the mobile lab and the remaining samples will be submitted to Test America. Additional ditch bank samples may

be collected downstream of the power pole, within the area of impact, at intervals of 100 feet. The results of this monitoring and sampling will be used to work cooperatively with EPA to determine when removal activities under this Order are complete.

5.0 WASTE STORAGE, TREATMENT, TRANSPORTATION, AND DISPOSAL PLAN

5.1 Excavated Soils

Soil generated during excavation activities in the Impacted Area is being managed as described in the "Report of Completion of the Removal and Restoration Activities at a Facility Located at or About State Route 58 and Maple Street in Wellington, Ohio Required by Section VI, Paragraph 34 of the Order". Specifically, excavated soils stored in roll-off boxes or in stockpiles are in the process of being determined whether they are a characteristic hazardous waste or not and disposed at one of the following facilities:

- EnviroSafe Services of Ohio, Inc., 876 Otter Creek Road, Oregon, OH
- Heritage – WTI, 1250 S. George Street, East Liverpool, OH
- Ross Incineration Services, 36790 Giles Road, Grafton, OH

If analytical results do not meet the criteria for disposal at EnviroSafe, the soil will be transported for disposal at Heritage - WTI, Ross, or an additional facility approved to accept the material. Additional soils generated during the removal action as part of the Order or as part of ongoing site characterization activities may be characterized and disposed of as non-hazardous material with appropriate analytical data as required by the approved landfill.

Respondent's contractors are coordinating and maintaining a spreadsheet containing the date soil samples were collected, the date analytical results were received, the date soil was removed from the site, and the amount of soil removed. These spreadsheets, including soil disposal documentation (i.e., manifests, dump tickets, etc.) will be provided to EPA in progress reports required by Section VI, paragraph 37 and the final report to comply with Section VI, paragraph 34, item j) of the Order.

5.2 Liquid Wastes

Liquids recovered during removal actions include gasoline, impacted surface water and groundwater, and decontamination water. Following waste characterization, recovered liquids will be stored on-site in frac tanks and transported to the following disposal locations:

1. Recovered gasoline will be transported to Sunoco Marketing and Terminals located at 999 Home Avenue, Akron, OH, and

2. Recovered surface water, groundwater, and decontamination water will be transported by tanker truck to one of the following locations:
 - Heath Oil, 5821 US Route 322, Franklin, PA;
 - Danco Industrial, Inc., 5609 State Route 8, Harrisville, OH;
 - Central Ohio Oil, 809 Marion Road, Columbus, OH; or
 - Clean Water Ltd., 300 Cherokee Drive, Dayton, OH.

Transportation and disposal will comply with applicable laws, including proper waste characterization, waste manifesting, and DOT regulations.

5.3 Other Wastes

Other wastes such as used absorbent pads or booms, soiled tyvek suits, soiled gloves, etc. will be collected in bags at the point of generation. The bags will be placed in a designated roll-off box and disposed of as hazardous waste at Heritage – WTI or Ross Incineration. Transportation and disposal will comply with applicable laws, including proper waste characterization, waste manifesting, and DOT regulations. Other wastes generated in the future may be characterized and disposed of as non-hazardous material with appropriate analytical data as required by the approved landfill.

6.0 SCHEDULE

Respondent expects to be complete with removal actions required under this Order before February 17, 2012 and submit a report to EPA by March 9, 2012 to comply with Section VI, paragraph 34, item j) of the Order. The report will detail all work completed including monitoring and analytical data, disposal records, and all documentation related to response actions completed by February 17, 2012. Respondent expects that this report will constitute the final report under this Order and satisfy all requirements under the Order with all future site characterization and remedial activities performed under the direction of Ohio EPA.

7.0 REPORTING AND COMMUNICATIONS

7.1 Key Personnel and Communications

Respondent has assigned the following personnel to streamline communications:

- Charlie Stewart – Incident Commander
- Dave Chalson – Incident Commander
- Chad Arey – Incident Commander
- Gus Borkland – Environmental Lead
- Alan Gillie – Safety Lead

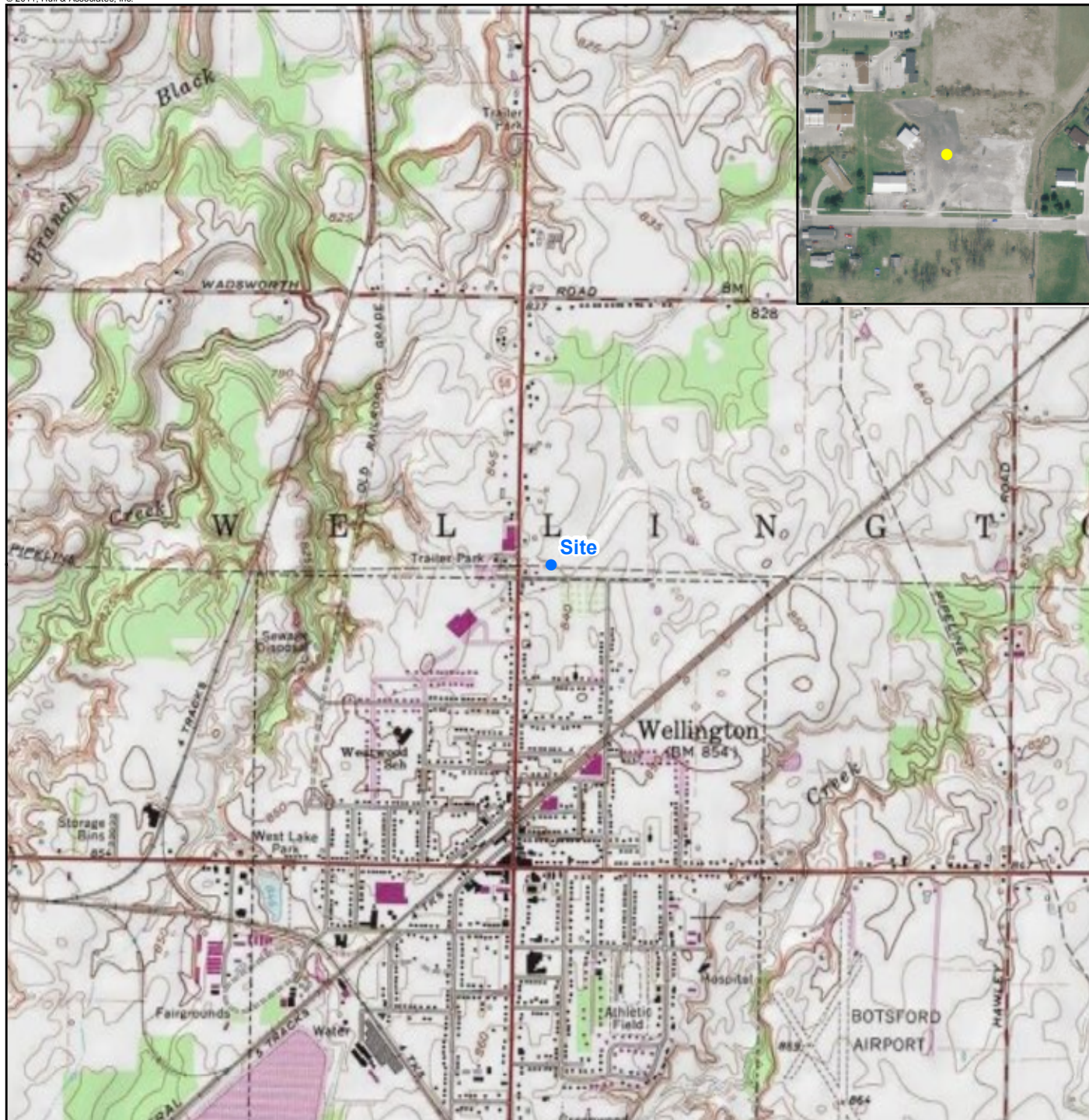
If changes of these personnel occur, Respondent will inform EPA of such changes.

As described above, removal activities are nearly complete and Respondent expects to follow the approach described herein. However, if changes in the approach for removal activities are warranted to adapt to changing field observations and conditions or other reasons, Respondent will promptly notify and work cooperatively with EPA to implement such changes.

7.2 Reports Required by Order

Since the release was discovered on January 12, 2012, Respondent has been tracking and recording the volume of recovered gasoline during the response, including but not limited to gasoline, gasoline impacted water and other gasoline impacted materials (e.g., booms and debris) and reporting estimates daily to EPA to comply with Section VI, paragraph 34, item h) of the Order. Respondent will continue to comply with this daily reporting requirement. Respondent will also prepare a report of removal activities to comply with Section VI, paragraph 34, item j) of the Order and provide progress reports to comply with Section VI, paragraph 37 of the Order. The first progress report was submitted to EPA on January 20, 2012.

FIGURES



Legend

● Site Location

Source: The topographic map was acquired through the USGS Topographic Map web service. Topo quadrangle date not provided.

The aerial photo in the inset was acquired through the Microsoft Virtual Earth Aerial Photography web service. Aerial photography date not provided.

0 500 1,000 2,000 Feet
1:24,000



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Pipeline Release
Work Plan for On-Going Removal Actions

Site Location Map

105 Maple Street
Village of Wellington, Lorain County, Ohio

Date:

January 2012

File Name:
SL0012_05_Fig01_SiteLocMap.mxd

Edited: 1/24/2012 By: jsliifer

Figure

1

