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Via Courier

Ms. Shanna Schmitt and
Ms. Stacey Hendry-Van Patten
Minnesota Pollution Control Agency
520 Lafayette Road North
St. Paul, Minnesota 55155-4194

ENVIRONMENT

Subject:
Phase II - Interior Investigation Work Plan
Ford Twin Cities Assembly Plant, St. Paul, Minnesota
MPCA VIC Project Number VP23530
MPCA PBP Number PB3682

Date:
May 28, 2010

Contact:
Bryan Zinda

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Our ref:
MN000613.0003

Dear Ms. Schmitt and Ms. Hendry-Van Patten:

On behalf of Ford Motor Company (Ford), ARCADIS has prepared this *Phase II - Interior Investigation Work Plan* (Work Plan) for the Twin Cities Assembly Plant (TCAP) in accordance with the requirements of the Minnesota Pollution Control Agency (MPCA) Voluntary Investigation and Cleanup (VIC) Program and Petroleum Brownfields Program (PBP).

This work plan describes the investigation activities to be completed to evaluate Features identified during the Phase I for Features located within buildings at the Site. All utility clearance, sampling protocols, quality assurance/quality control (QA/QC) measures, decontamination procedures, surveying protocols, and data management procedures will be completed in accordance with the field sampling plan (FSP) dated June 18, 2007 and the site-specific health and safety plan (HASP) dated March 12, 2007 that have been prepared for the TCAP site.

Background

Property Location and Description

TCAP is located at 966 South Mississippi River Boulevard in St. Paul, Ramsey County, Minnesota (Figure 1) at the approximate easting coordinate 484562.5 meters (m) and northing coordinate 4973822.5 m. TCAP is located in a mixed industrial-, commercial-, and residential-use area on the eastern shore of the

Mississippi River, along the east side of South Mississippi River Boulevard, south of Ford Parkway and west of South Cleveland Avenue.

Scope of Work

The scope of work is described in detail in the *Phase II – Interior Investigation Table 1* and the *Phase II – Interior Scope of Work Overview presented in Tables 2 and 3*. The work is broken out into two phases, initial and auxiliary, in Tables 2 and 3 and on the figures. The initial phase will be conducted during the July 2010 plant shutdown starting on Tuesday July 6, 2010 and ending on Saturday July 10, 2010 and the August 2010 plant shutdown starting on Monday August 9, 2010 and ending on Saturday August 14, 2010. The auxiliary phase will be conducted after the plant closure which is scheduled for December 23, 2011. Below is a summary of the means and methods to be utilized during the investigation.

Feature Investigations

The Features are presented on Figures 2A, 2B, 3A, 3B, 3C and 3D. A full utility clearance will be performed prior to initiating any subsurface work at the Site. The total number of borings to be advanced, the depth of exploration, and analytical sampling requirements were developed based on the current or previous use of each Feature. Analytical sampling requirements for each Feature were also based on the type of known or potential chemical usage and the applicable MPCA guidance based on the Feature type. Detailed sampling and analysis information is presented in Tables 1 and 2. Where Features overlap, borings will be co-located and samples submitted for all of the analytical parameters identified within the overlapping Features.

Boreholes will be advanced utilizing direct push. Soil samples will be collected, and soil boring logs will be prepared for each boring in accordance with MPCA and Minnesota Department of Health (MDH) requirements and will present the United Soil Classification System (USCS) classification of the materials encountered. Each soil sample will be screened in the field with a photoionization detector (PID).

At each boring location, soil sample(s) will be collected for laboratory analysis as presented in Tables 1, 2 and 3. Sample depths are also detailed in Tables 1, 2 and 3.

Soil sampling techniques will be consistent with State requirements or guidelines. See the site-specific FSP for further details. Soil samples collected for laboratory analysis will be placed in a cooler with wet ice and transported to the laboratory by the laboratory courier, following standard chain-of-custody procedures. Soil samples

will be submitted for one or more of the following analytes: volatile organic compounds (VOCs) using United States Environmental Protection Agency (USEPA) Method 8260, semi-volatile organic compounds (SVOCs) using USEPA Method 8270, gasoline range organics (GRO) using the Wisconsin Modified Method, diesel range organics (DRO) using the Wisconsin Modified Method, metals using USEPA Method 6010, and polychlorinated biphenyls (PCBs) using USEPA Method 8082. Specific analyte information is summarized in Tables 1, 2 and 3.

Since the exact depth of several Features is unknown, a field determination will be made on the sample depth based upon visual observations (i.e. staining), elevated PID readings, or other evidence of impacts or of the historical surface material.

At several locations the Features will undergo a visual observation only (i.e. transformers, several pits, etc.). Based on the visual observation, additional work may be required (i.e. sings of spills or leaks). For further details regarding each Feature refer to the tables.

In the event that potential impacts appear to extend to the water table (based on visual observations, odors, or PID readings), temporary monitoring wells may be installed and a groundwater grab sample collected and analyzed. Groundwater samples will be submitted for one or more of the following analytes: VOCs using USEPA Method 8260, SVOCs using USEPA Method 8270, GRO using the Wisconsin Modified Method, DRO using the Wisconsin Modified Method, metals using USEPA Method 6010, and PCBs using USEPA Method 8082. See Tables 1 and 2 for details on the number and locations of proposed temporary monitoring wells. In the event that sufficient groundwater cannot be recovered for the analysis of all parameters, the groundwater grab samples will be collected in the following order: VOCs, SVOCs, metals, PCBs, GRO, and DRO, omitting parameters that are not required for a given Feature. In accordance with MDH well code, temporary wells will be properly abandoned within 48 hours of installation.

All analytical data collected will be verified and/or validated. Full (Level IV) validation will be completed on approximately 10 percent of all field sample data.

Quality Assurance Program

The QA/QC protocols for the work described in this Work Plan will meet or exceed the standards of care required by the State of Minnesota and by Ford. The QA/QC protocols will be completed in accordance with those presented the FSP.

Decontamination

The decontamination protocols will be completed in accordance with those presented in the FSP and the site-specific HASP.

Reporting

The results of the Phase II - Interior Investigation will be submitted to the MPCA. The report will discuss information collected during the site characterization activities and will include a technical overview of the site characterization execution, results, findings, and recommendations.

Schedule

The interior investigation will be broken out into two phases. The initial phase will be conducted during the July 2010 plant shutdown starting on Tuesday July 6, 2010 and ending on Saturday July 10, 2010 and the August 2010 plant shutdown starting on Monday August 9, 2010 and ending on Saturday August 14, 2010. The auxiliary phase will be conducted after the plant closure which is scheduled for December 23, 2011.

We appreciate your assistance with this project. If you have questions or need additional information, please call Bryan Zinda of ARCADIS at your convenience.

Sincerely,

ARCADIS U.S., Inc.

Robert J. Ellis
Certified Project Manager

Bryan Zinda, PE
Senior Engineer

Copies:
Ms. Barbara Rusinowski, Ford Motor Company, Dearborn, Michigan
Mr. John Meyers, Ford Twin Cities Assembly Plant, St. Paul, Minnesota

Attachments:
Tables & Figures

Table 1. Investigation Summary - Interior Features
Phase II – Interior Investigation
Twin Cities Assembly Plant, Saint Paul, Minnesota

Focus Area	Background	Work Summary	Soil Sampling and Analysis	Groundwater Sampling and Analysis	Methods Summary	Comments
Work Element 1 - Focus Area Assessment						
1. Used Oil AST Feature 50 – East of Central Engineering Offices Ref. Fig. 2A P14	A used oil AST is located near the lye/caustic tank. Used oil is placed in the tank and stored prior to being recycled/disposed by a used oil company. Heavy staining and a few pools of oil were observed near the used oil AST. In addition, the used oil AST is situated in a containment unit that is at a lower grade than the floor surface; therefore, the integrity of the AST could not be assessed.	Complete **one soil boring** in the area of the used oil AST to assess subsurface conditions. Borings shall extend a minimum depth of 10 feet below ground level or until competent bedrock is encountered or to a maximum depth of 20 feet below ground level to set a temporary well. The boring drilled at this feature will also be used to evaluate conditions at the adjacent Lye AST (Feature 51) and Containment Pit (Feature 70) co-located in this area.	The base scope includes up to a total of **two soil samples** to be submitted for analysis. VOCs (Method 8260B) SVOCs (Method 8270C) DRO (Wisconsin Modified Method) RCRA Metals (Method 6010) PCBs (Method 8082) The boring drilled at this feature will also be used to evaluate conditions at the Lye AST (Feature 51) co-located in this area. Soil samples (up to **two soil samples total**) collected at Plant Coordinates P14 will also be analyzed for the following parameters: pH (Method 150.1) See Notes 1 & 2 on page 20.	VOCs (Method 8260B) SVOCs (Method 8270C) DRO (Wisconsin Modified Method) RCRA Metals (Method 6010) PCBs (Method 8082) Assume **one groundwater grab sample** will be analyzed for the aforementioned parameters. The boring drilled at this feature will also be used to evaluate conditions at the Lye AST (Feature 51) co-located in this area. In addition to the parameters described above, the groundwater sample from Plant Coordinates P14 will also be analyzed for the following parameters: pH (Method 150.1) See Note 3 on page 20.	Soil borings will be advanced utilizing a Geoprobe rig. Continuous soil samples will be collected utilizing 4 or 5-foot disposable acetate liners. Complete Sheen tests in the 0-2 foot interval in each boring, as appropriate. See Note 4 on page 20.	See Note 5 on page 20.
2. Lye AST Feature 51 – East of Central Engineering Offices Ref. Fig. 2A P15	A lye/caustic AST was observed near the used oil AST. It appeared as if the lye AST was no longer in service; however, the AST was full of caustic liquid. The AST was observed to be in poor condition and appeared rusted. Staining and leakage was observed around the lye/caustic AST.	A boring will be advanced at the Used Oil AST (Feature 50) **co-located** in this area. Data from the boring drilled at the Used Oil AST should provide sufficient data to evaluate the Lye AST.	Use data from the boring drilled at the Used Oil AST co-located in this area to evaluate soil conditions at the Lye AST. RCRA Metals (Method 6010) pH (Method 150.1) These analytical parameters are included for soil samples collected from borings evaluating features co-located in this area. See Notes 1 & 2 on page 20.	RCRA Metals (Method 6010) pH(Method 150.1)	Soil borings will be advanced utilizing a Geoprobe rig. Continuous soil samples will be collected utilizing 4 or 5-foot disposable acetate liners. See Note 4 on page 20.	Review considerations listed for other features co-located in this area.

Table 1. Investigation Summary - Interior Features
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Twin Cities Assembly Plant, Saint Paul, Minnesota

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Focus Area	Background	Work Summary	Soil Sampling and Analysis	Groundwater Sampling and Analysis	Methods Summary	Comments
3. Transformers 12A and 12B Feature 53 – East of Front Offices Ref. Fig. 3A F2	Formerly PCB-containing electrical transformers.	a) ARCADIS will conduct a visual inspection of the flooring around each transformer and include the results of the inspection in the investigation report. b) If damage to the concrete is observed and if an indication of a release is present, ARCADIS may complete **one soil boring** in the area of the transformers to assess subsurface conditions. Borings shall extend a minimum depth of 10 feet below ground level or until competent bedrock is encountered or to a maximum depth of 20 feet below ground level to set a temporary well.	SVOCs (Method 8270C) DRO (Wisconsin Modified Method) PCBs (Method 8082) Assume a total of **two soil samples** will be analyzed for the aforementioned parameters. See Notes 1 & 2 on page 20.	SVOCs (Method 8270C) DRO (Wisconsin Modified Method) PCBs (Method 8082) Assume **one groundwater grab sample** will be analyzed for the aforementioned parameters. See Note 3 on page 20.	Soil borings will be advanced utilizing a Geoprobe rig. Continuous soil samples will be collected utilizing 4 or 5-foot disposable acetate liners. See Note 4 on page 20.	See Note 5 on page 20.
4. Substation Feature 54 – Cafeteria Basement Ref. Fig. 3A H17	Substation includes 5 transformers which were formerly PCB containing. The transformers have since been retrofitted or replaced with non-PCB containing oils. Additionally, according to TCAP personnel, three transformers that are not recorded in documentation were installed as power backup for a flood which occurred during 1965. One of the three transformers was observed to be leaking oil, which may potentially contain PCBs, based on the timeframe of installation.	a) ARCADIS will conduct a visual inspection of the flooring around each transformer and include the results of the inspection in the investigation report. b) If damage to the concrete is observed and if an indication of a release is present, ARCADIS may complete **two hand augers** in the area of the transformers to assess subsurface conditions. Borings shall extend a minimum depth of 5 feet below ground level or until competent bedrock is encountered.	SVOCs (Method 8270C) DRO (Wisconsin Modified Method) PCBs (Method 8082) Assume a total of **four soil samples** will be analyzed for the aforementioned parameters. See Notes 1 & 2 on page 20.	None.	Soil borings will be advanced with a hand auger. See Note 4 on page 20.	See Note 5 at end of Table.
5. Substation Feature 55 – Basement Ref. Fig. 3A J26	Substation includes 4 transformers which were formerly PCB containing.	a) ARCADIS will conduct a visual inspection of the flooring around each transformer and include the results of the inspection in the investigation report. b) If damage to the concrete is observed and if an indication of a release is present, ARCADIS may complete **two hand augers** in the area of the transformers to assess subsurface conditions. Borings shall extend a minimum depth of 5 feet below ground level or until competent bedrock is encountered.	The base scope includes a total of up to **four soil samples** to be submitted for analysis. SVOCs (Method 8270C) DRO (Wisconsin Modified Method) PCBs (Method 8082) See Notes 1 & 2 on page 20.	None.	Soil borings will be advanced with a hand auger. See Note 4 on page 20.	See Note 5 on page 20.

Table 1. Investigation Summary - Interior Features
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Page 3

Focus Area	Background	Work Summary	Soil Sampling and Analysis	Groundwater Sampling and Analysis	Methods Summary	Comments
6. Transformers 6, 10 and 10A Feature 56 – South Side of Main Assembly Building – Northern Portion Ref. Fig. 3A L34	Formerly PCB-containing electrical transformers, located on truss-level platform.	ARCADIS will conduct a visual inspection of the flooring beneath and around each transformer and include the results of the inspection in the investigation report.	None.	None.	None.	None.
7. Transformers 3 and 9 Feature 57 – Roof Level Penthouse Ref. Fig. 3A AA17	Formerly PCB-containing electrical transformers.	ARCADIS will conduct a visual inspection of the flooring beneath and around each transformer and include the results of the inspection in the investigation report.	None.	None.	None.	None.
8. Transformer #7 Feature 58 – Warehouse, Roof Level Penthouse Ref. Fig. 3B C55	Formerly PCB-containing electrical transformers.	ARCADIS will conduct a visual inspection of the flooring beneath and around each transformer and include the results of the inspection in the investigation report.	None.	None.	None.	None.

Table 1. Investigation Summary - Interior Features
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Focus Area	Background	Work Summary	Soil Sampling and Analysis	Groundwater Sampling and Analysis	Methods Summary	Comments
9. Railroad Spur Feature 59 – Warehouse, Main Assemble Building Ref. Fig. 2A and 3B, AA56-G56 G23-G40 P29-P41	Railroad spurs are utilized for the delivery and loading of parts and other items to and from the assembly plant via rail cars. In addition, railcars are used to transfer final products to their retail destinations. Some minimal to moderate areas of staining were observed within the vicinity of the railroad spurs.	Complete **five soil borings** within the area of the railroad spurs to assess subsurface conditions. a) One boring will be completed at the south spur on Ref. Fig. 3B, Plant Coordinates AA56-G56. b) Two borings will be completed at the east spur on Ref. Fig. 3B, Plant Coordinates P29-P41. c) One boring will be completed at the west spur (Figure 3B) Plant Coordinates G23-G40. A second boring will be completed and will also evaluate the former Dell-Park Pit (Feature 100) **co-located** in this area which will be completed pre-plant closure (Figure 2A). Borings shall extend a minimum depth of 10 feet below ground level or until competent bedrock is encountered or to a maximum depth of 20 feet below ground level to set a temporary well. One boring will be co-located within the former Dell-Park Pit (Feature 100). Data from this boring will be used to assess conditions within the former pit. Two borings will be advanced to evaluate the Bascale Bridges (2) (Feature 64) located along the tracks at Plant Coordinates G35 (Figure 3B) and G56-57 (Figure 3B). Data from the borings drilled at the Bascale Bridges should provide sufficient data to assist in evaluating the Railroad spurs.	The base scope includes a total of up to **ten soil samples** to be submitted for analysis. VOCs (Method 8260B) SVOCs (Method 8270C) DRO (Wisconsin Modified Method) RCRA Metals (Method 6010) A subset of soil samples will be analyzed based on the presence of staining at the boring locations. A total of **six soil samples** will be submitted for analysis of the following parameters: PCBs (Method 8082) See Notes 1 & 2 on page 20.	VOCs (Method 8260B) SVOCs (Method 8270C) DRO (Wisconsin Modified Method) PCBs (Method 8082) RCRA Metals (Method 6020) Assume a total of **two groundwater grab samples** will be analyzed for the aforementioned parameters. See Note 3 on page 20.	Soil borings will be advanced utilizing a Geoprobe rig. Continuous soil samples will be collected utilizing 4 or 5-foot disposable acetate liners. Complete Sheen tests in the 0-2 foot interval in each boring, as appropriate. See Note 4 on page 20.	See Note 5 on page 20. One boring to be installed during the first phase of work (co-located boring with Feature 100). The remaining borings will be completed during the auxiliary investigation.

Table 1. Investigation Summary - Interior Features
Phase II – Interior Investigation
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Focus Area	Background	Work Summary	Soil Sampling and Analysis	Groundwater Sampling and Analysis	Methods Summary	Comments
10. Former Railroad Spur Feature 60 – Main Assembly Building Ref. Fig. 2A and 2B G1-G23 L1-L41	Former railroad spurs were utilized for the delivery and loading of parts and other items to and from the assembly plant via rail cars.	Complete **seven soil borings** within the area of the railroad spurs to assess subsurface conditions. a) Four borings will be completed at the former east spur on Ref. Figs. 2A and 2B, Plant Coordinates L1-L41 b) Three borings will be completed at the former west spur on Ref. Fig. 2A, Plant Coordinates G1-G43. One of these borings will also evaluate the former Dell-Park Pit (Feature 100) **co-located** in this area. Borings shall extend a minimum depth of 10 feet below ground level or until competent bedrock is encountered or to a maximum depth of 20 feet below ground level to set a temporary well. One boring will be co-located within the former Dell-Park Pit (Feature 100). Data from this boring will be used to assess conditions within the former pit.	The base scope includes a total of up to **fourteen soil samples** to be submitted for analysis. VOCs (Method 8260B) SVOCs (Method 8270C) DRO (Wisconsin Modified Method) RCRA Metals (Method 6010) A subset of soil samples will be analyzed based on the presence of staining at the boring locations. A total of **eight soil samples** will be submitted for analysis of the following parameters: PCBs (Method 8082) See Notes 1 & 2 on page 20.	VOCs (Method 8260B) SVOCs (Method 8270C) DRO (Wisconsin Modified Method) PCBs (Method 8082) RCRA Metals (Method 6020) Assume a total of **four groundwater grab samples** will be analyzed for the aforementioned parameters. See Note 3 on page 20.	Soil borings will be advanced utilizing a Geoprobe rig. Continuous soil samples will be collected utilizing 4 or 5-foot disposable acetate liners. Complete Sheen tests in the 0-2 foot interval in each boring, as appropriate. See Note 4 on page 20.	See Note 5 on page 20.

Table 1. Investigation Summary - Interior Features
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Focus Area	Background	Work Summary	Soil Sampling and Analysis	Groundwater Sampling and Analysis	Methods Summary	Comments
11. Bascale Bridge Feature 64 – Main Assembly Building Ref. Fig. 3B G35 G56-G57	Used to raise/lower the bridge across railroad spur to facilitate movement of the railroad cars along the spur.	Complete **two soil borings** near the bridges to assess subsurface conditions. a) One boring will be completed at the bridge located on Ref. Fig. 3B, Plant Coordinates G35 b) One boring will be completed at the bridge located on Ref. Fig. 3B, Plant Coordinates G56. Borings shall extend a minimum depth of 15 feet below ground level or until competent bedrock is encountered or to a maximum depth of 20 feet below ground level to set a temporary well. The above borings shall be completed with the below co-located borings after plant shutdown. Two borings will be advanced to evaluate the Bascale Bridges (2) co-located along the Railroad Spur (Feature 59). Data from the boring drilled at the Bascale Bridges should provide sufficient data to assist in evaluating the Railroad Spurs.	The base scope includes a total of up to **four soil samples** to be submitted for analysis. VOCs (Method 8260B) SVOCs (Method 8270C) DRO (Wisconsin Modified Method) PCBs (Method 8082) RCRA Metals (Method 6010) See Notes 1 & 2 on page 20.	VOC s(Method 8260B) SVOCs (Method 8270C) DRO (Wisconsin Modified Method) PCBs (Method 8082) RCRA Metals (Method 6020) Assume a total of **two groundwater grab samples** will be analyzed for the aforementioned parameters. See Note 3 on page 20.	Soil borings will be advanced utilizing a Geoprobe rig. Continuous soil samples will be collected utilizing 4 or 5-foot disposable acetate liners. Complete Sheen tests in the 0-2 foot interval in each boring, as appropriate. See Note 4 on page 20.	See Note 5 on page 20.
12. Elevator to Paint Feature 66 – Main Assembly Building – North Portion Ref. Fig. 2A L16	One Marmac elevator/lift was observed in the northeastern portion of the main building utilized to transfer metal bodies and painted bodies to and from main assembly and paint. This Marmac elevator was observed to be leaking hydraulic fluid into the concrete surrounding the piston (standing oil) and on the surrounding ground surface.	Complete **one soil boring** in the area of the elevator (outside the shaft) to assess subsurface conditions. Boring shall extend a minimum depth of 15 feet below ground level or until competent bedrock is encountered or to a maximum depth of 20 feet below ground level to set a temporary well.	The base scope includes a total of up to **two soil samples** to be submitted for analysis. VOCs (Method 8260B) SVOCs (Method 8270C) DRO (Wisconsin Modified Method) PCBs (Method 8082) See Notes 1 & 2 on page 20.	VOCs (Method 8260B) SVOCs (Method 8270C) DRO (Wisconsin Modified Method) PCBs (Method 8082) Assume **one groundwater grab sample** will be analyzed for the aforementioned parameters. See Note 3 on page 20.	Soil borings will be advanced utilizing a Geoprobe rig. Continuous soil samples will be collected utilizing 4 or 5-foot disposable acetate liners. See Note 4 on page 20.	See Note 5 on page 20.

Table 1. Investigation Summary - Interior Features
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Twin Cities Assembly Plant, Saint Paul, Minnesota

Focus Area	Background	Work Summary	Soil Sampling and Analysis	Groundwater Sampling and Analysis	Methods Summary	Comments
13. Production Hydraulic Lifts Feature 67 – Main Assembly Building – North Portion (Five Areas) Ref. Fig. 3A and 3B B7 K30 K31 M28 Rattle Shack	Five in-ground hydraulic lifts associated with assembly operations and contain hydraulic fluid.	Hydraulic lifts to be removed during plant decommissioning and evaluated at that time. Soil samples will be collected either from the excavation walls and floor or from soil borings.	The base scope includes a total of up to **ten soil samples** to be submitted for analysis. VOCs (Method 8260B) SVOCs (Method 8270C) DRO (Wisconsin Modified Method) PCBs (Method 8082) See Notes 1 & 2 on page 20.	VOCs (Method 8260B) SVOCs (Method 8270C) DRO (Wisconsin Modified Method) PCBs (Method 8082) Assume **three groundwater grab samples** will be analyzed for the aforementioned parameters. See Note 3 on page 20.	Either excavation or soil borings. If soil borings, they will be advanced utilizing a Geoprobe rig. Continuous soil samples will be collected utilizing 4 or 5-foot disposable acetate liners. See Note 4 on page 20.	See Note 5 on page 20.
14. Battery Charging Trenches Feature 68 – Eastern Portion of Main Assembly Building Ref. Fig. 2A Q17-R17	The battery charging trenches are utilized to collect spillage relating to battery charging operations, such as battery acid. Spillage and leakage was observed within the trenches during site reconnaissance activities. The interior integrity of the trenches was unable to be determined.	**Two soil borings will be installed prior to plant shutdown both are co-located with Feature 104.** Borings shall extend a minimum depth of 15 feet below ground level or until competent bedrock is encountered or to a maximum depth of 20 feet below ground level to set a temporary well.	The base scope includes a total of up to **four soil samples** to be submitted for analysis. RCRA Metals (Method 6010) pH (Method 150.1) Because borings cannot be drilled at the nearby Tank Farm Trenches (Feature 94), soil samples (**two soil samples total**) collected from the boring advanced nearest Feature 94 will also be analyzed for the following parameters: VOCs (Method 8260B) SVOCs (Method 8270C) GRO (Wisconsin Modified Method) DRO (Wisconsin Modified Method) PCBs (Method 8082) See Notes 1 & 2 on page 20.	RCRA Metals (Method 6010) pH (Method 150.1) Assume **one groundwater grab sample** will be analyzed for the aforementioned parameters. Because borings cannot be drilled at the nearby Tank Farm Trenches (Feature 94), the water sample from the temporary well will also be analyzed for the following parameters: VOCs (Method 8260B) SVOCs (Method 8270C) GRO (Wisconsin Modified Method) DRO (Wisconsin Modified Method) PCBs (Method 8082) See Note 3 on page 20.	Soil borings will be advanced utilizing a Geoprobe rig. Continuous soil samples will be collected utilizing 4 or 5-foot disposable acetate liners. See Note 4 on page 20.	Review considerations listed for other features co-located in this area. Borings will be installed during the first phase of work since they are co-located with Feature 104 – Former Paint Operations.
15. Containment Pit Feature 70 – East of Central Engineering Office Ref. Fig. 2A P14-P15	Containment pit includes oil collection/belt skimmer system, sump lift stations, and housekeeping trenches to channel and collect spills. Staining and leakage was observed in and around this containment area, which is located around the used oil AST and the lye/caustic AST. The integrity of the containment pit is unknown.	Following plant closure the pit will be inspected. **A boring will be advanced at the Used Oil AST (Feature 50) co-located in this area prior to plant shutdown.** Data from the boring drilled at the Used Oil AST should provide sufficient data to evaluate the Containment Pit.	Use data from the boring drilled at the Used Oil AST (Feature 50) co-located in this area to evaluate soil conditions at the Containment Pit. VOCs (Method 8260B) SVOCs (Method 8270C) DRO (Wisconsin Modified Method) RCRA Metals (Method 6010) PCBs (Method 8082) These analytical parameters are included for soil samples collected from borings evaluating features co-located in this area. See Notes 1 & 2 on page 20.	VOCs (Method 8260B) SVOCs (Method 8270C) DRO (Wisconsin Modified Method) RCRA Metals (Method 6010) PCBs (Method 8082) pH (Method 150.1) These analytical parameters are included for soil samples collected from borings evaluating features co-located in this area.	Soil borings will be advanced utilizing a Geoprobe rig. Continuous soil samples will be collected utilizing 4 or 5-foot disposable acetate liners. Complete Sheen tests in the 0-2 foot interval in each boring, as appropriate. See Note 4 on page 20.	Review considerations listed for other features co-located in this area. Boring will be installed during the first phase of work since it is co-located with Feature 50 – Used Oil AST.

Table 1. Investigation Summary - Interior Features
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Focus Area	Background	Work Summary	Soil Sampling and Analysis	Groundwater Sampling and Analysis	Methods Summary	Comments
16. Glass Basement Feature 80 – Main Assembly Building – North Portion Ref. Fig. 2A L17	Basement formerly used for the storage of molten glass. Staining observed in the western portion of the basement, originating from leaking machinery above. Also, green staining observed on concrete floor surface in eastern portion of basement, from which the origin appeared to also be from machinery leakage above. The concrete floor in the glass basement was observed to be pitted and cracked.	Complete **three hand augers** in the glass basement to assess subsurface conditions. Borings shall be positioned in a manner that provides adequate spatial distribution of data. Borings shall extend a minimum depth of 5 feet below ground level or until competent bedrock is encountered.	The base scope includes a total of up to **six soil samples** to be submitted for analysis. VOCs (Method 8260B) SVOCs (Method 8270C) DRO (Wisconsin Modified Method) TAL Metals (Method 6010) PCBs (Method 8082) See Notes 1 & 2 on page 20.	None.	Soil borings will be advanced utilizing a hand auger. See Note 4 on page 20.	See Note 5 on page 20.
17. Housekeeping Trenches Feature 86 – Main Assembly Building – North Portion Ref. Fig. 3A M24-M27	Trenching is present around normally wet operations to collect overflow/runoff/spills and prevent spreading throughout the plant. Trenching is blind and is pumped manually as needed. Hydraulic fluids from nearby machinery were observed to be collecting within the trenches. The interior integrity of the concrete trenches is unknown.	Following plant closure, ARCADIS will conduct a visual inspection of each trench after the trench is emptied and cleaned. If the integrity of the unit is suspect, or indications of a release are noted, ARCADIS may complete **three soil borings** in the area of the trenches to assess subsurface conditions. Borings shall be positioned in a manner that provides adequate spatial distribution of data. Borings shall extend a minimum depth of 15 feet below ground level or until competent bedrock is encountered or to a maximum depth of 20 feet below ground level to set a temporary well.	The base scope includes a total of up to **six soil samples** to be submitted for analysis. VOCs (Method 8260B) SVOCs (Method 8270C) DRO (Wisconsin Modified Method) RCRA Metals (Method 6010) PCBs (Method 8082) See Notes 1 & 2 on page 20.	VOCs (Method 8260B) SVOCs (Method 8270C) DRO (Wisconsin Modified Method) RCRA Metals (Method 6010) PCBs (Method 8082) Assume **one groundwater grab sample** will be analyzed for the aforementioned parameters. See Note 3 on page 20.	Soil borings will be advanced utilizing a Geoprobe rig. Continuous soil samples will be collected utilizing 4 or 5-foot disposable acetate liners. Complete Sheen tests in the 0-2 foot interval in each boring, as appropriate. See Note 4 on page 20.	See Note 5 on page 20.

Table 1. Investigation Summary - Interior Features
Phase II – Interior Investigation
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Focus Area	Background	Work Summary	Soil Sampling and Analysis	Groundwater Sampling and Analysis	Methods Summary	Comments
18. Liquid Collection Trench Feature 88 – Main Assembly Building (three locations) Ref. Fig. 3A and 3B B23 D39-D42 L24-L27	Trenching is present around normally wet operations to collect overflow/runoff/spills and prevent spreading throughout the plant. Trenching is blind and is pumped manually as needed. Hydraulic fluids from nearby machinery were observed to be collecting within the trenches. The interior integrity of the concrete trenches is unknown.	Following plant closure, ARCADIS will conduct a visual inspection of each trench after the trench is emptied and cleaned. If the integrity of the unit is suspect, or indications of a release are noted, ARCADIS may complete **five soil borings** to assess subsurface conditions. Borings shall be positioned in a manner that provides adequate spatial distribution of data. d) One boring may be completed at the trench located at Ref. Fig. 3A, Plant Coordinates B23. e) Two borings may l be completed at the trenches located at Ref. Fig. 3B, Plant Coordinates D39-D42. f) Two borings may be completed at the trench located at Ref. Fig. 3A, Plant Coordinates L24-L27. Borings shall extend a minimum depth of 15 feet below ground level or until competent bedrock is encountered or to a maximum depth of 20 feet below ground level to set a temporary well.	The base scope includes a total of up to **ten soil samples** to be submitted for analysis. VOCs (Method 8260B) SVOCs (Method 8270C) DRO (Wisconsin Modified Method) RCRA Metals (Method 6010) PCBs (Method 8082) See Notes 1 & 2 on page 20.	VOCs (Method 8260B) SVOCs (Method 8270C) DRO (Wisconsin Modified Method) RCRA Metals (Method 6010) PCBs (Method 8082) Assume **three groundwater grab samples** will be analyzed for the aforementioned parameters. See Note 3 on page 20.	Soil borings will be advanced utilizing a Geoprobe rig. Continuous soil samples will be collected utilizing 4 or 5-foot disposable acetate liners. Complete Sheen tests in the 0-2 foot interval in each boring, as appropriate. See Note 4 on page 20.	See Note 5 on page 20.
19. Oil/Water Separators Feature 89 – Main Assembly Building (Five Locations) Ref. Figs. 3A and 3B AA7-AA8 B42 M34 P15 Q5	Five oil/water separators manage oily water associated with unknown systems; cleaning cart operations and other operations in the plant.	The oil/water separators are routinely cleaned by TCAP staff. TCAP staff shall contact ARCADIS immediately after each unit is cleaned, and ARCADIS will conduct a visual inspection of the interior. Once plant is closed, if the integrity of the unit is suspect, or indications of a release are noted, ARCADIS may complete **five soil borings**, one in the area of each of the five units, to assess subsurface conditions. Borings shall extend a minimum depth of 15 feet below ground level or until competent bedrock is encountered or to a maximum depth of 20 feet below ground level to set a temporary well.	The base scope includes a total of up to **ten soil samples** to be submitted for analysis. VOCs (Method 8260B) SVOCs (Method 8270C) DRO (Wisconsin Modified Method) RCRA Metals (Method 6010) PCBs (Method 8082) See Notes 1 & 2 on page 20.	VOCs (Method 8260B) SVOCs (Method 8270C) DRO (Wisconsin Modified Method) RCRA Metals (Method 6010) PCBs (Method 8082) Assume **five groundwater grab samples** will be analyzed for the aforementioned parameters. See Note 3 on page 20.	Soil borings will be advanced utilizing a Geoprobe rig. Continuous soil samples will be collected utilizing 4 or 5-foot disposable acetate liners. Complete Sheen tests in the 0-2 foot interval in each boring, as appropriate. See Note 4 on page 20.	See Note 5 on page 20.

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20. Process Equipment Trench Feature 90 – Main Assembly Building – South Portion Ref. Fig. 3B N38-N39	Process equipment with heavy staining and leakage observed on the surrounding concrete floor surface.	Following plant closure, ARCADIS will conduct a visual inspection of each trench after the trench is emptied and cleaned. If the integrity of the unit is suspect, or indications of a release are noted, ARCADIS may **two soil borings** in the area of the trench to assess subsurface conditions may be installed. Borings shall extend a minimum depth of 10 feet below ground level or until competent bedrock is encountered or to a maximum depth of 20 feet below ground level to set a temporary well.	The base scope includes a total of up to **four soil samples** to be submitted for analysis. VOCs (Method 8260B) SVOCs (Method 8270C) GRO (Wisconsin Modified Method) DRO (Wisconsin Modified Method) RCRA Metals (Method 6010) PCBs (Method 8082) See Notes 1 & 2 on page 20.	VOCs (Method 8260B) SVOCs (Method 8270C) GRO (Wisconsin Modified Method) DRO (Wisconsin Modified Method) RCRA Metals (Method 6010) PCBs (Method 8082) Assume **one groundwater grab sample** will be analyzed for the aforementioned parameters. See Note 3 on page 20.	Soil borings will be advanced utilizing a Geoprobe rig. Continuous soil samples will be collected utilizing 4 or 5-foot disposable acetate liners. Complete Sheen tests in the 0-2 foot interval in each boring, as appropriate. See Note 4 on page 20.	See Note 5 on page 20.
21. Sump Feature 93 – North of Cafeteria Ref. Fig.3A J15	Sump manages water associated with an unknown system.	Following plant closure, ARCADIS will conduct a visual inspection of the walls and base of the sump and include the results of the inspection in the investigation report. If the integrity of the unit is suspect, or indications of a release are noted, ARCADIS may complete **one soil boring** in the area of the sump to assess subsurface conditions. Borings shall extend a minimum depth of 15 feet below ground level or until competent bedrock is encountered or to a maximum depth of 20 feet below ground level to set a temporary well.	The base scope includes a total of up to **two soil samples** to be submitted for analysis. VOCs (Method 8260B) SVOCs (Method 8270C) DRO (Wisconsin Modified Method) RCRA Metals (Method 6010) PCBs (Method 8082) See Notes 1 & 2 on page 20.	VOCs (Method 8260B) SVOCs (Method 8270C) DRO (Wisconsin Modified Method) RCRA Metals (Method 6010) PCBs (Method 8082) Assume **one groundwater grab sample** will be analyzed for the aforementioned parameters. See Note 3 on page 20.	Soil borings will be advanced utilizing a Geoprobe rig. Continuous soil samples will be collected utilizing 4 or 5-foot disposable acetate liners. Complete Sheen tests in the 0-2 foot interval in each boring, as appropriate. See Note 4 on page 20.	See Note 5 on page 20.
22. Tank Farm Trenches Feature 94 – East Side of Main Assembly Building – North Portion Ref. Fig. 3A Q17-R18	Trenching is used as a utility pipe chase for tank loading and unloading and appears to drain to pits labeled as confined space. Trenches and pits act as secondary containment for ASTs (Feature 94).	Following plant closure, the trenches will be inspected. If the integrity of the unit is suspect, or indications of a release are noted, **two soil borings** in the area of the trenches may be installed to assess subsurface conditions. Borings shall extend a minimum depth of 15 feet below ground level or until competent bedrock is encountered or to a maximum depth of 20 feet below ground level to set a temporary well.	The base scope includes a total of up to **four soil samples** to be submitted for analysis. VOCs (Method 8260B) SVOCs (Method 8270C) GRO (Wisconsin Modified Method) DRO (Wisconsin Modified Method) RCRA Metals (Method 6010) PCBs (Method 8082) See Notes 1 & 2 on page 20.	VOCs (Method 8260B) SVOCs (Method 8270C) GRO (Wisconsin Modified Method) DRO (Wisconsin Modified Method) RCRA Metals (Method 6010) PCBs (Method 8082) Assume **one groundwater grab sample** will be analyzed for the aforementioned parameters. See Note 3 on page 20.	Soil borings will be advanced utilizing a Geoprobe rig. Continuous soil samples will be collected utilizing 4 or 5-foot disposable acetate liners. Complete Sheen tests in the 0-2 foot interval in each boring, as appropriate. See Note 4 on page 20.	See Note 5 on page 20.

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23. Former Pits Feature 97 – Main Assembly Building (17 Locations) Ref. Fig. 2A, 3A, 3B A7 B27 B28 C24 C40 D25 C19 F26 F28 G2 L27 M2 N31 P2	Fourteen former pits were identified in portions of the main assembly plant for which the former purpose is unknown. Steel plates covered some of the former pit locations while others were identified on historical drawings. It is possible that the former pits may have been associated with historical operations, such as former painting or plating operations. The interiors of the pits could not be inspected; therefore, it is unknown as to the contents or integrity of the pits.	Following plant closure, ARCADIS will conduct a visual inspection of each Pit (if the Pit has not already been abandoned) after the Pit is emptied and cleaned. If the integrity of the unit is suspect, or indications of a release are noted, up to **fourteen soil borings** in the area of the pits to assess subsurface conditions may be installed. a) One boring will be completed at the former pit located at Ref. Fig. 2A, Plant Coordinates A7. This boring is **co-located** with Feature 103 and will be completed prior to plant shutdown. b) One boring will be completed at the former pit located at Ref. Fig. 3A, Plant Coordinates B27. c) One boring will be completed at the former pit located at Ref. Fig. 3A, Plant Coordinates B28. d) One boring will be completed at the former pit located at Ref. Fig. 3A, Plant Coordinates C24. e) One boring will be completed at the former pit located at Ref. Fig. 3B, Plant Coordinates C40 f) One boring will be completed at the former pit located at Ref. Fig. 3A, Plant Coordinates C25. g) One boring will be completed at the former pit located at Ref. Fig. 2A, Plant Coordinates C19. This boring is **co-located** with Feature 103 and will be completed prior to plant shutdown. h) One boring will be completed at the former pit located at Ref. Fig. 3A, Plant Coordinates F26. i) One boring will be completed at the former pit located at Ref. Fig. 3A, Plant Coordinates F28 j) One boring will be completed at the former pit located at Ref. Fig. 3A, Plant Coordinates G2 k) One boring will be completed at the former pit located at Ref. Fig. 3A, Plant Coordinates L27. l) One boring will be completed at the former pit located at Ref. Fig. 3A, Plant Coordinates M2. m) One boring will be completed at the former pit located at Ref. Fig. 3B, Plant Coordinates N31 n) One boring will be completed at the former pit located at Ref. Fig. 3A, Plant Coordinates P2. Borings shall extend a minimum depth of 15 feet below ground level or until competent bedrock is encountered or to a maximum depth of 20 feet below ground level to set a temporary well.	The base scope includes a total of up to **twenty-eight soil samples** to be submitted for analysis. VOCs (Method 8260B) SVOCs (Method 8270C) DRO (Wisconsin Modified Method) TAL Metals (Method 6010) PCBs (Method 8082) One of the borings drilled at this feature (plant coordinates D18) will also be used to evaluate conditions at the Former Nickel Plating Operation (Feature 103) co-located in this area. Soil samples (**two soil samples total**) collected at Plant Coordinates D18 will also be analyzed for the following parameters: CYANIDE (Method 335.4) See Notes 1 & 2 on page 20.	VOCs (Method 8260B) SVOCs (Method 8270C) DRO (Wisconsin Modified Method) TAL Metals (Method 6010) PCBs (Method 8082) Assume **fourteen groundwater grab samples** will be analyzed for the aforementioned parameters. See Note 3 on page 20.	Soil borings will be advanced utilizing a Geoprobe rig. Continuous soil samples will be collected utilizing 4 or 5-foot disposable acetate liners. Complete Sheen tests in the 0-2 foot interval in each boring, as appropriate. See Note 4 on page 20.	See Note 5 on page 20. Two borings will be installed during the first phase of work since they are co-located (with Feature 103). The co-located borings are the boring for the former pit located at Plant Coordinates A7 and the boring for the former pit located at Plant Coordinates N31.

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Focus Area	Background	Work Summary	Soil Sampling and Analysis	Groundwater Sampling and Analysis	Methods Summary	Comments
24. Vaults Feature 98 – Northern Portion of Main Assembly Building Ref. Fig. 3A H3	Vaults identified and were screwed shut next to a conveyor line was identified. The use of the vaults is unknown.	Following plant closure, ARCADIS will conduct a visual inspection of the vault after it is emptied and cleaned. If the integrity of the unit is suspect, or indications of a release are noted, **one soil boring** in the area of the vault to assess subsurface conditions may be installed. Boring shall extend a minimum depth of 15 feet below ground level or until competent bedrock is encountered or to a maximum depth of 20 feet below ground level to set a temporary well.	The base scope includes a total of up to **two soil samples** to be submitted for analysis. VOCs (Method 8260B) SVOCs (Method 8270C) DRO (Wisconsin Modified Method) RCRA Metals (Method 6010) PCBs (Method 8082) See Notes 1 & 2 on page 20.	VOCs (Method 8260B) SVOCs (Method 8270C) DRO (Wisconsin Modified Method) RCRA Metals (Method 6010) PCBs (Method 8082) Assume **one groundwater grab sample** will be analyzed for the aforementioned parameters. See Note 3 on page 20.	Soil borings will be advanced utilizing a Geoprobe rig. Continuous soil samples will be collected utilizing 4 or 5-foot disposable acetate liners. Complete Sheen tests in the 0-2 foot interval in each boring, as appropriate. See Note 4 on page 20.	See Note 5 on page 20.
25. Former Dell-Park Pit Feature 100 – Main Assembly Building – North Portion (Three Locations) Ref. Fig. 2A G19-G27 M7 M22	Several former Dell-Park paint sludge collection pit locations were identified through a review of historical drawings and by interviews with TCAP personnel. It is unknown if these paint sludge collection pits were properly cleaned and closed.	**Three soil borings** in the area of the pits to assess subsurface conditions will be installed. Borings shall be positioned in a manner that provides adequate spatial distribution of data. a) Two borings will be completed at the former pit located at Ref. Fig. 2A, Plant Coordinates M7. b) One boring will be completed at the former pit located at Ref. Fig. 2A, Plant Coordinates M22. Borings shall extend a minimum depth of 15 feet below ground level or until competent bedrock is encountered or to a maximum depth of 20 feet below ground level to set a temporary well. In addition, one boring associated with the rail spur (Feature 59) and one boring associated with the former rail spur (feature 60) are co-located within the bounds of the former pit located at Ref. Fig. 2A, Plant Coordinates G19-G27. Data from these borings will be used to assess conditions within the former pit.	The base scope includes a total of up to **six soil samples** to be submitted for analysis. VOCs (Method 8260B) SVOCs (Method 8270C) PCBs (Method 8082) TAL Metals (Method 6010) See Notes 1 & 2 on page 20.	VOCs (Method 8260B) SVOCs (Method 8270C) PCBs (Method 8082) RCRA Metals (Method 6010) Assume **two groundwater grab samples** will be analyzed for the aforementioned parameters. See Note 3 on page 20.	Soil borings will be advanced utilizing a Geoprobe rig. Continuous soil samples will be collected utilizing 4 or 5-foot disposable acetate liners. Complete Sheen tests in the 0-2 foot interval in each boring, as appropriate. See Note 4 on page 20.	See Note 5 on page 20.

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26. Former Engine Line Drain Pit Feature 102 – Main Assembly Building – South Portion Ref. Fig. 2B B36 B38-B39 C36	Based on a review of historical drawings, engine line drain pits were identified in this area.	Complete **three soil borings,** one near each of the pits to assess subsurface conditions. Borings shall extend a minimum depth of 15 feet below ground level or until competent bedrock is encountered or to a maximum depth of 20 feet below ground level to set a temporary well.	The base scope includes a total of up to **six soil samples** to be submitted for analysis. VOCs (Method 8260B) SVOCs (Method 8270C) GRO (Wisconsin Modified Method) DRO (Wisconsin Modified Method) RCRA Metals (Method 6010) See Notes 1 & 2 on page 20.	VOCs (Method 8260B) SVOCs (Method 8270C) GRO (Wisconsin Modified Method) DRO (Wisconsin Modified Method) RCRA Metals (Method 6010) Assume **three groundwater grab samples** will be analyzed for the aforementioned parameters. See Note 3 on page 20.	Soil borings will be advanced utilizing a Geoprobe rig. Continuous soil samples will be collected utilizing 4 or 5-foot disposable acetate liners. Complete Sheen tests in the 0-2 foot interval in each boring, as appropriate. See Note 4 on page 20.	See Note 5 on page 20.
27. Former Nickel Plating Operations Feature 103 – Northwest Portion of Main Assembly Building – North Portion Ref. Fig. 2A A6-D22	Through interviews with TCAP personnel, nickel plating was indicated to have occurred within the northwestern portion of the main assembly building.	Complete **two soil borings** in the area to assess subsurface conditions. Borings shall be positioned in a manner that provides adequate spatial distribution of data. Borings shall extend a minimum depth of 15 feet below ground level or until competent bedrock is encountered or to a maximum depth of 20 feet below ground level to set a temporary well. The above borings shall be completed with the below co-located borings prior to plant shutdown. In addition, two borings associated with former pits (Feature 97) will be co-located within the bounds of the former nickel plating operation. Data from these borings will be used to assess conditions within the former nickel plating operation	The base scope includes a total of up to **four soil samples** to be submitted for analysis. TAL Metals (Method 6010) CYANIDE (Method 335.4) See Notes 1 & 2 on page 20.	TAL Metals (Method 6010) CYANIDE (Method 335.4) Assume **two groundwater grab samples** will be analyzed for the aforementioned parameters. See Note 3 on page 20.	Soil borings will be advanced utilizing a Geoprobe rig. Continuous soil samples will be collected utilizing 4 or 5-foot disposable acetate liners. See Note 4 on page 20.	In addition, the boring co-located with the production hydraulic lift at Plant Coordinates A7 will also be converted to a temporary well. Data from this well will be used to assess conditions within the former nickel plating operation. See Note 5 on page 20.
28. Former Paint Operations Feature 104 – Northeast Corner of Main Assembly Building – North Portion Ref. Fig. 2A L4-N33	Former location of painting operations prior to construction of current paint building. The paint kitchen operations included the usage, storage and disposal of hazardous materials (paints and solvents).	Borings from many other features are co-located within this area, including Features 50, 51, 59, 67, 68, 70, 86, 89, 97, and 100. Data from borings drilled at these other features should provide sufficient data to evaluate the Former Paint Operations.	Use data from borings drilled at other features co-located in this area to evaluate soil conditions at the Former Paint Operations. VOCs (Method 8260B) TAL Metals (Method 6010) These analytical parameters are include for soil samples collected from borings evaluating features co-located in this area. See Notes 1 & 2 on page 20.	VOCs (Method 8260B) TAL Metals (Method 6010)	Soil borings will be advanced utilizing a Geoprobe rig. Continuous soil samples will be collected utilizing 4 or 5-foot disposable acetate liners. Complete Sheen tests in the 0-2 foot interval in each boring, as appropriate. See Note 4 on page 20.	Review considerations listed for other features co-located in this area.

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29. Former Solvent Fire Feature 106 – East Side of Main Assembly Building – North Portion Ref. Fig. 2A P18	A drum of waste solvent in the hazardous barrel storage area had developed a slow leak and was sitting in a small pool of solvent. The solvent was ignited by nearby steel cutting operations. A total of 80 gallons of solvent from the 2 drums was consumed by the fire and approximately 30 gallons were recovered from the 2 drums that were ignited. Documentation pertaining to sampling in the area of the fire following the fire was not found in documentation reviewed during research activities.	Complete **two soil borings** in the area to assess subsurface conditions. Borings shall be positioned in a manner that provides adequate spatial distribution of data. Borings shall extend a minimum depth of 10 feet below ground level or until competent bedrock is encountered or to a maximum depth of 20 feet below ground level to set a temporary well.	The base scope includes a total of up to **four soil samples** to be submitted for analysis. VOCs (Method 8260B) See Notes 1 & 2 on page 20.	VOCs (Method 8260B) Assume **one groundwater grab sample** will be analyzed for the aforementioned parameters. See Note 3 on page 20.	Soil borings will be advanced utilizing a Geoprobe rig. Continuous soil samples will be collected utilizing 4 or 5-foot disposable acetate liners. See Note 4 on page 20.	See Note 5 on page 20.
30. Fluid Fill Area Feature 107 – Northwest Corner of Main Assembly Building – North Portion Ref. Fig. 3A AA8-AA19	Portion of the assembly plant where vehicle fluids and gasoline are placed in new vehicles.	Complete **three soil borings** in the area of the fluid fill area to assess subsurface conditions. Borings shall be positioned in a manner that provides adequate spatial distribution of data. Borings shall extend a minimum depth of 10 feet below ground level or until competent bedrock is encountered or to a maximum depth of 20 feet below ground level to set a temporary well.	The base scope includes a total of up to **six soil samples** to be submitted for analysis. VOCs (Method 8260B) SVOCs (Method 8270C) GRO (Wisconsin Modified Method) DRO (Wisconsin Modified Method) RCRA Metals (Method 6010) See Notes 1 & 2 on page 20.	VOC s(Method 8260B) SVOCs (Method 8270C) GRO (Wisconsin Modified Method) DRO (Wisconsin Modified Method) RCRA Metals (Method 6010) Assume **two groundwater grab samples** will be analyzed for the aforementioned parameters. See Note 3 on page 20.	Soil borings will be advanced utilizing a Geoprobe rig. Continuous soil samples will be collected utilizing 4 or 5-foot disposable acetate liners. Complete Sheen tests in the 0-2 foot interval in each boring, as appropriate. See Note 4 on page 20.	See Note 5 on page 20.

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31. Hydraulic Lifts Feature 108 – Paint Building Ref. Fig. 3C B3 C1 C2 D3 E2 F3 E5 D9 D9 E9 F8s C8n C8s C15 E17	Twenty-two -in-ground hydraulic lifts located throughout the paint building.	Hydraulic lifts to be removed during plant decommissioning and evaluated at that time. Soil samples will be collected either from the excavation walls and floor or from soil borings.	The base scope includes a total of up to **twenty-four soil samples** to be submitted for analysis. VOCs (Method 8260B) SVOCs (Method 8270C) DRO (Wisconsin Modified Method) See Notes 1 & 2 on page 20.	VOCs (Method 8260B) SVOCs (Method 8270C) DRO (Wisconsin Modified Method) PCBs (Method 8082) Assume **eight groundwater grab samples** will be analyzed for the aforementioned parameters. See Note 3 on page 20.	Either excavation or soil borings. If soil borings, they will be advanced utilizing a Geoprobe rig. Continuous soil samples will be collected utilizing 4 or 5-foot disposable acetate liners. See Note 4 on page 20.	See Note 5 on page 20.
32. Transformers 20A and 20B Feature 110 – Paint Building Penthouse Ref. Fig. 3C D9-E9	Formerly PCB-containing electrical transformers.	ARCADIS will conduct a visual inspection of the flooring beneath and around each transformer and include the results of the inspection in the investigation report.	None.	None.	None.	None.
33. Transformers 21A, 21B and 21C Feature 111 – Paint Building Penthouse Ref. Fig. 3C B12-B13	Formerly PCB-containing electrical transformers.	ARCADIS will conduct a visual inspection of the flooring beneath and around each transformer and include the results of the inspection in the investigation report.	None.	None.	None.	None.

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34. Transformers 22A and 22B Feature 112 – Paint Building Penthouse Ref. Fig. 3C D17-E17	Formerly PCB-containing electrical transformers.	ARCADIS will conduct a visual inspection of the flooring beneath and around each transformer and include the results of the inspection in the investigation report.	None.	None.	None.	None.
35. Transformers 23A and 23B Feature 113 – Paint Building, Central Exhaust Fans Ref. Fig. 3C Gw11	Formerly PCB-containing electrical transformers.	a) ARCADIS will conduct a visual inspection of the flooring around each transformer and include the results of the inspection in the investigation report. b) If damage to concrete is observed and if an indication of a release is present, ARCADIS may complete **one soil boring** in the area of the transformers to assess subsurface conditions. Borings shall extend a minimum depth of 10 feet below ground level or until competent bedrock is encountered or to a maximum depth of 20 feet below ground level to set a temporary well.	The base scope includes a total of up to **two soil samples** to be submitted for analysis. SVOCs (Method 8270C) DRO (Wisconsin Modified Method) PCBs (Method 8082) See Notes 1 & 2 on page 20.	SVOCs (Method 8270C) DRO (Wisconsin Modified Method) PCBs (Method 8082) Assume **one groundwater grab sample** will be analyzed for the aforementioned parameters. See Note 3 on page 20.	Soil borings will be advanced utilizing a Geoprobe rig. Continuous soil samples will be collected utilizing 4 or 5-foot disposable acetate liners. See Note 4 on page 20.	See Note 5 on page 20.
36. Transformers 24A and 24B. Feature 114 - Paint Building, Central Exhaust Fans Ref. Fig. 3C J11	Formerly PCB-containing electrical transformers.	a) ARCADIS will conduct a visual inspection of the flooring around each transformer and include the results of the inspection in the investigation report. b) If damage to concrete is observed and if an indication of a release is present. ARCADIS may I complete **one soil boring** in the area of the transformers to assess subsurface conditions. Borings shall extend a minimum depth of 10 feet below ground level or until competent bedrock is encountered or to a maximum depth of 20 feet below ground level to set a temporary well.	The base scope includes a total of up to **two soil samples** to be submitted for analysis. SVOCs (Method 8270C) DRO (Wisconsin Modified Method) PCBs (Method 8082) See Notes 1 & 2 on page 20.	SVOCs (Method 8270C) DRO (Wisconsin Modified Method) PCBs (Method 8082) Assume **one groundwater grab sample** will be analyzed for the aforementioned parameters. See Note 3 on page 20.	Soil borings will be advanced utilizing a Geoprobe rig. Continuous soil samples will be collected utilizing 4 or 5-foot disposable acetate liners. See Note 4 on page 20.	See Note 5 on page 20.

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37. Phosphate System Trench Feature 117 – East Side of Paint Building Ref. Fig. 3C A3 – A20	Trenching is utilized for housekeeping purposes as well as for draining the various stages of the phosphate system (1,000x1x1). Floor drains are located throughout the trenching and gravity drain to the wastewater treatment plant. Heavy metals are utilized in the phosphate system and are contained in the discharge from the phosphate system, which are fed through underground piping to the wastewater treatment plant. According to TCAP personnel the integrity of this underground piping system has not been inspected or tested since its installation in 1985.	Following plant closure, the trench shall be inspected. Once inspection is complete the need for the soil boring will be completed. **Four soil borings** in the area of the trench to assess subsurface conditions may be installed. Borings shall be positioned in a manner that provides adequate spatial distribution of data. Borings shall extend a minimum depth of 15 feet below ground level or until competent bedrock is encountered or to a maximum depth of 20 feet below ground level to set a temporary well.	The base scope includes a total of up to **eight soil samples** to be submitted for analysis. SVOCs (Method 8270C) DRO (Wisconsin Modified Method) RCRA Metals (Method 6010) See Notes 1 & 2 on page 20.	SVOCs (Method 8270C) DRO (Wisconsin Modified Method) RCRA Metals (Method 6010) Assume **two groundwater grab samples** will be analyzed for the aforementioned parameters. See Note 3 on page 20.	Soil borings will be advanced utilizing a Geoprobe rig. Continuous soil samples will be collected utilizing 4 or 5-foot disposable acetate liners. See Note 4 on page 20.	See Note 5 on page 20.
38. Paint Sludge Pit Sump Feature 120 – Southwest of Paint Sludge Pits, Paint Building Ref. Fig. 3C Gw10	Sump collects excess water from paint booths and condensation in the surrounding drain tile around the paint sludge pits. The sump discharges into the paint sludge pits. The sump carries water, which contains solvent borne paint.	Following plant closure, the sump shall be inspected. Once inspection is complete the need for the soil boring will be completed. **Two soil borings** in the area of the sump to assess subsurface conditions may be installed. Borings shall be positioned in a manner that provides adequate spatial distribution of data. These borings will be advanced along the west and south exterior of the building. Borings shall extend a minimum depth of 10 feet below ground level or until competent bedrock is encountered or to a maximum depth of 20 feet below ground level to set a temporary well.	The base scope includes a total of up to **four soil samples** to be submitted for analysis. VOCs (Method 8260B) TAL Metals (Method 6010) See Notes 1 & 2 on page 20.	VOCs (Method 8260B) TAL Metals (Method 6010) Assume **one groundwater grab sample** will be analyzed for the aforementioned parameters. See Note 3 on page 20.	Soil borings will be advanced utilizing a Geoprobe rig. Continuous soil samples will be collected utilizing 4 or 5-foot disposable acetate liners. Complete Sheen tests in the 0-2 foot interval in each boring, as appropriate See Note 4 on page 20.	**These borings will be advanced along the west and south exterior of the building.** See Note 5 on page 20.

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Focus Area	Background	Work Summary	Soil Sampling and Analysis	Groundwater Sampling and Analysis	Methods Summary	Comments
39. Former Sulfuric Acid AST Feature 126 – Northeast Corner of Paint Building Ref. Fig. 3C A2	A formerly utilized sulfuric acid AST was observed near the sodium hydroxide tank currently in use. The AST was observed to be heavily corroded and staining and leakage was observed below the AST in the secondary containment dike. The integrity of the concrete containment dike could not be ascertained due to the liquid contained within the dike system.	Following plant closure, the AST shall be inspected. Once inspection is complete the need for the soil boring will be completed. **One soil boring** may be completed in the area of the former AST to assess subsurface conditions. Borings shall extend a minimum depth of 10 feet below ground level or until competent bedrock is encountered or to a maximum depth of 20 feet below ground level to set a temporary well, if inspection on pit sump reveals structural defects.	The base scope includes a total of up to **two soil samples** to be submitted for analysis. RCRA Metals (Method 6010) pH (Method 150.1) See Notes 1 & 2 on page 20.	RCRA Metals (Method 6010) pH(Method 150.1) Assume **one groundwater grab sample** will be analyzed for the aforementioned parameters. See Note 3 on page 20.	Soil borings will be advanced utilizing a Geoprobe rig. Continuous soil samples will be collected utilizing 4 or 5-foot disposable acetate liners. See Note 4 on page 20.	See Note 5 on page 20.
40. Former Transformers #11 and #11A Feature 136 – Western Portion of Steam Plant Ref. Fig. 3D B2-B5	Formerly PCB-containing electrical transformers.	a) ARCADIS will conduct a visual inspection of the flooring around each transformer and include the results of the inspection in the investigation report. b) If damage to concrete is observed and if an indication of a release is present. ARCADIS may complete **one soil boring** in the area of the transformers to assess subsurface conditions. Borings shall extend a minimum depth of 15 feet below ground level or until competent bedrock is encountered or to a maximum depth of 20 feet below ground level to set a temporary well.	The base scope includes a total of up to **two soil samples** to be submitted for analysis. SVOCs (Method 8270C) DRO (Wisconsin Modified Method) PCBs (Method 8082) See Notes 1 & 2 on page 20.	SVOCs (Method 8270C) DRO (Wisconsin Modified Method) PCBs (Method 8082) Assume **one groundwater grab sample** will be analyzed for the aforementioned parameters. See Note 3 on page 20.	Soil borings will be advanced utilizing a Geoprobe rig. Continuous soil samples will be collected utilizing 4 or 5-foot disposable acetate liners. See Note 4 on page 20.	See Note 5 on page 20.
41. Former Dispenser Location Feature 137 – Northeast Corner of Main Assembly Building, North Portion Ref. Fig. 2A P3	Based on a review of historical drawings, a former dispenser area was located outside of the main assembly building at the time of its use. The building has since expanded and covers this former location. There was no removal or closure documentation found regarding the former dispenser area; therefore, it is unknown if the dispenser area was properly removed or if closure verification samples were taken.	Complete **one soil boring** in the area of the former dispensers to assess subsurface conditions. Borings shall extend a minimum depth of 15 feet below ground level or until competent bedrock is encountered or to a maximum depth of 20 feet below ground level to set a temporary well.	The base scope includes a total of up to **two soil samples** to be submitted for analysis. VOCs (Method 8260B) SVOCs (Method 8270C) GRO (Wisconsin Modified Method) DRO (Wisconsin Modified Method) RCRA Metals (Method 6010) See Notes 1 & 2 on page 20.	VOCs (Method 8260B) SVOCs (Method 8270C) GRO (Wisconsin Modified Method) DRO (Wisconsin Modified Method) RCRA Metals (Method 6020) Assume a total of **one groundwater grab samples** will be analyzed for the aforementioned parameters. See Note 3 on page 20.	Soil borings will be advanced utilizing a Geoprobe rig. Continuous soil samples will be collected utilizing 4 or 5-foot disposable acetate liners. Complete Sheen tests in the 0-2 foot interval in each boring, as appropriate. See Note 4 on page 20.	See Note 5 on page 20.

Table 1. Investigation Summary - Interior Features
Phase II – Interior Investigation
Twin Cities Assembly Plant, Saint Paul, Minnesota

	Work Summary	Soil Assessment	Groundwater Assessment	Sampling and Analysis
Work Element 2 – Disposal of Investigation-Derived Waste				
Characterization of Investigation-Derived Waste (IDW)	All soil, concrete and groundwater IDW will be containerized and properly labeled. Concrete from the coring activities should be placed in separate drums from the soil.	The base scope of work assumes that a total of **2 composite soil samples** (for each phase of work) will be submitted for waste characterization. The base scope of work assumes that a total of **1 composite concrete sample** (for each phase of work) will be submitted for waste characterization.	Document visual water quality of each purge water composite sample. The base scope of work assumes **one composite purge water sample** (for each phase of work) will be submitted for waste characterization.	SOIL: TCLP VOCs TCLP SVOCs TCLP Metals PCBs Total sulfide and cyanide Corrosivity Flashpoint TCLP Pesticides/Herbicides GROUNDWATER: VOCs (Method 8260) SVOCs (Method 8270) RCRA Metals (Method 6010) CONCRETE: TCLP VOCs TCLP SVOCs TCLP Metals PCBs Total sulfide and cyanide Corrosivity Flashpoint

Table 1. Investigation Summary - Interior Features
Phase II – Interior Investigation
Twin Cities Assembly Plant, Saint Paul, Minnesota

Notes:

1. If impacts are observed the boring will be continued until native materials are encountered and no visual, olfactory, or PID evidence of impacts is observed.
2. Soils will be continuously logged from the surface to the bottom of each bore hole. Under no circumstances shall borings extend beyond the base of a natural water bearing zone, if encountered.
   Visually assess and log the soil type and lithology in each boring using the USCS.
   Soil samples will not be collected from bedrock. Containerize the following soil samples for possible chemical analysis:
   - The soil sample with the highest field indication of organic vapors and/or visual and/or incidental olfactory evidence of impacts,
   - If possible impacts are identified and then there is no field indication of impacts, containerize a sample below the impacts to delineate the extent of soil impacts,
   - If organic vapor and/or visual and/or incidental olfactory evidence of impacts are observed at multiple depth intervals that could provide useful assessment or delineation data, containerize those samples,
   - If no organic vapor or visual or incidental olfactory evidence of impacts are observed, containerize a soil sample collected within six (6) inches of and above the saturated zone, or from the lower most interval of the soil boring if the saturated zone is not encountered.

   Soil sampling techniques shall be consistent with State requirements or guidelines.
3. If potential impacts extend to the water table, convert one soil boring to a temporary monitoring well and sample groundwater.
4. Conduct a visual inspection and record observations including areas of oily accumulation; staining; locations of cracks, seams, and breaches; liquid collection devices; and other physical features.
5. Hand coring or use of a portable coring machine will be required. Where borings are positioned in paved areas, the pavement shall be restored to match the surrounding area and surfaces.
   - Survey boring locations. Tie information into USGS benchmark and plant coordinate system if available.
   - Wells shall be left in place the minimum amount of time necessary and at a level that does not interfere with plant operations.
   - MS/MSD samples will be submitted at a rate of 1 per 20 samples based on matrix type. Blind sample duplicates will be also be submitted for groundwater samples at a rate of 1 per 20 samples. Field equipment samples will be submitted at a rate of 1 per 20 groundwater samples.
6. IDWs shall be managed and disposed in accordance with applicable State regulations.
7. QA/QC samples shall be collected and analyzed per State guidelines or regulations.
8. If the temporary well must remain in place longer than 72 hours it will need to be permitted in accordance with MDH requirements.

AST- Above Ground Storage Tank
TCAP- Twin Cities Assembly Plant
VOCs-Volatile Organic Compounds
SVOCs-Semi-volatile Organic Compounds
GRO – Gasoline Range Organics
DRO- Diesel Range Organics
PCBs- Polychlorinated Biphenyls
RCRA- Resource Conservation and Recovery Act
TAL- Target Analyte List
IDW – Investigation Derived Wastes
PID- Photoionization Detector
USCS- United States Soil Classification System
TCLP – Toxicity Characteristic Leaching Procedure
QA/QC – Quality Assurance/Quality Control

Table 2. Scope of Work Overview: Phase II - Initial Interior Investigation
Twin Cities Assembly Plant, Saint Paul, Minnesota

Focus Area	Feature Number	Reference Figure	Plant Coordinates	Drilling/Inspection							Soil Analytical										Groundwater Analytical									
				No. of Borings	No. of Hand Augers	No. of Temp Wells*	Depth of each (bgs) or to competent bedrock	Drilling Total Depth	Hand Auger Total Depth	Visual Inspection Only	VOCs (8260)	SVOCs (8270)	GRO (Wi)	DRO (Wi)	RCRA Metals (6010)	TAL Metals (6010)	PCBs (8082)	pH (150.1)	Cyanide (335.4)	Waste Character-ization[1]	VOCs (8260)	SVOCs (8270)	GRO (Wi)	DRO (Wi)	Dissolved RCRA Metals (6010)	Dissolved TAL Metals (6010)	PCBs (8082)	Cyanide (335.4)	pH (150.1)	Waste Character-ization[2]
WORK ELEMENT 1 - FOCUS AREA ASSESSMENT																														
1. Used Oil AST	50	2A	M14	1		1	20	20			2	2		2	2		2	2			1	1		1	1		1		1	
2. Lye AST	51	2A	M15																											
9. Railroad Spur	59	2A, 3A, 3B	A56-G56; G23-G40; P29-P41	1		1	10	10			2	2		2	2		1				1	1		1	1		1			
10. Former Railroad Spur	60	2A, 2B	G1-G23; L1-L41	7		4	10	70			14	14		14	14		8				4	4		4	4		4			
12. Elevator to Paint	66	2A	L16	1		1	15	20			2	2		2			2				1	1		1			1			
14. Battery Changing Trenches	68	2A	Q17-R17	2		1	15	40			2	2	2	2	4		2	4			1	1	1	1	1		1		1	
15. Containment Pits	70	2A	P14-P15							Yes																				
16. Glass Basement	80	2A	L17		3		5		15		6	6		6		6	6													
23. Former Pits	97	2A, 3A, 3B	A7, B27, B28, C24, C40, C25, D18, F26, F28, G2, L27, M2, N31, P2	2		2	20	40			4	4		4		4	4				2	2		2		2	2			
25. Former Dell-Park Pit	100	2A	G19-G27; M7, M22	3		2	20	60			6	6				6	6				2	2				2	2			
26. Former Engine Line Drain Pit	102	2B	B36; B38-B39; C36	3		3	20	60			6	6	6	6	6						3	3	3	3	3					
27. Former Nickel Plating Operation	103	2A	A6-D22	2		2	20	40								4			4							2		2		
28. Former Paint Operations	104	2A	L4-N33																											
29. Former Solvent Fire	106	2A	P18	2		1	10	20			4										1									
41. Former Dispensing Location	137	2A	P3	1		1	20	20			2	2	2	2	2						1	1	1	1	1					
WORK ELEMENT 2 - IDW AND QA/QC SAMPLES																														
Characterization of Investigation-Derived Waste (IDW)																			2											2
QA/QC Samples																					4	4	1	4	2	2	4	1	1	
Totals				25	3	19		400	15		50	46	10	40	30	20	31	6	4	2	21	20	6	18	13	8	16	3	3	2

Notes:
Details associated with the drilling, soil and groundwater sampling activites for each Focus Areas are presented in Table 1. Investigation Summary - Interior Features
Indicates borings and/or wells are being advanced to evaluate multiple focus areas. Table may list additional analytical parameters.
*Temporary wells are to be installed only if evidence of impacts are observed in the soil samples.
[1] Waste Characterization samples will be analyzed for the following: TCLP VOCs, TCLP SVOCs, TCLP Metals, PCBs, Total sulfide and cyanide, Corrosivity, Flashpoint, and TCLP Pesticides/Herbizides. Up to 3 concrete samples are included in the IDW sampling. Concrete samples will not be analyzed for TCLP Pesticides/Herbicides
[2] Waste Characterization samples will be analyzed for the following: TCLP VOCs, TCLP SVOCs, and RCRA Metals.

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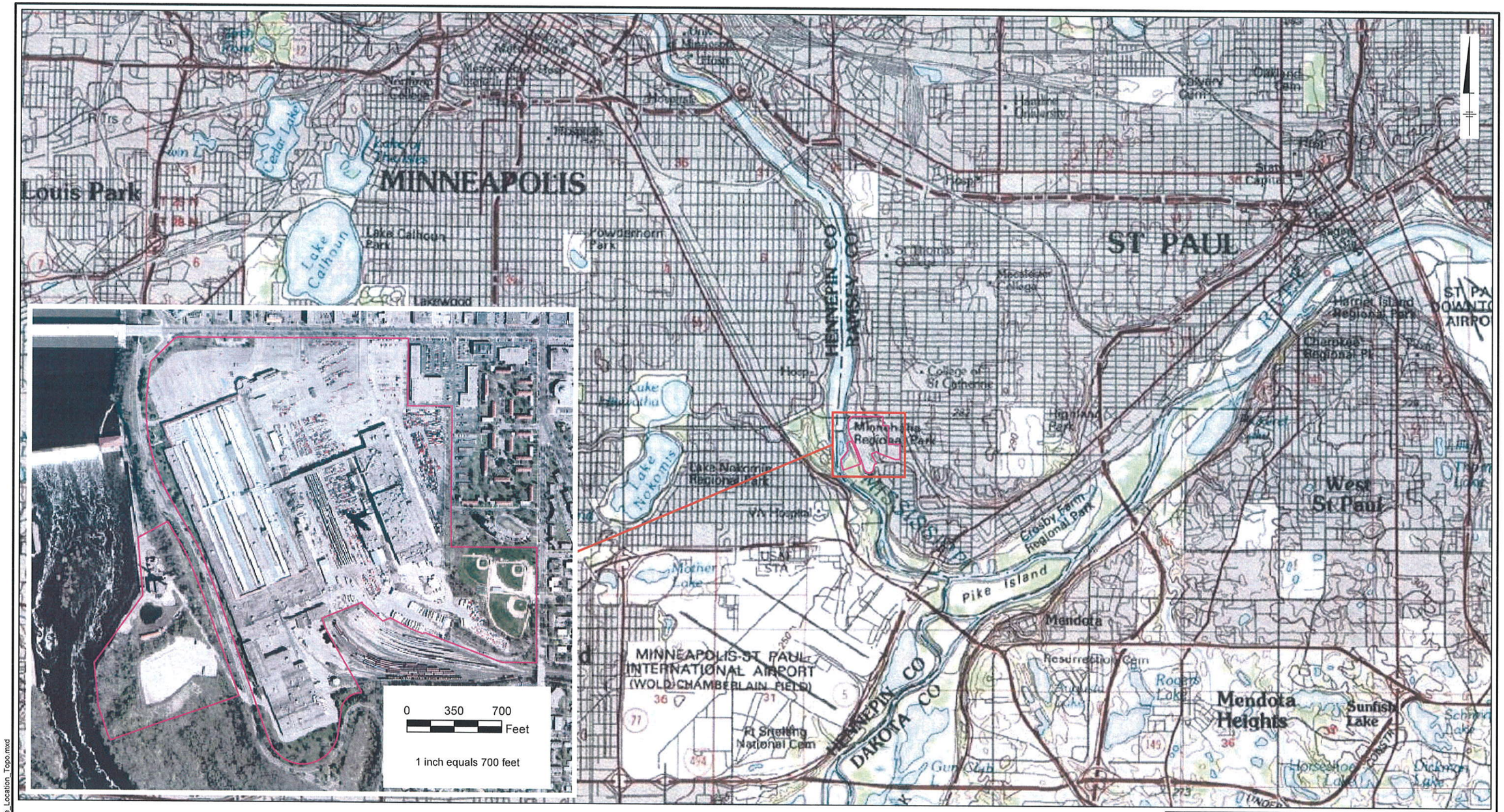
Table 3. Scope of Work Overview: Phase II - Auxillary Interior Investigation
Twin Cities Assembly Plant, Saint Paul, Minnesota

				Drilling/Inspection							Soil Analytical										Groundwater Analytical									
Focus Area	Feature Number	Reference Figure	Plant Coordinates	No. of Boring	No. of Hand Augers	No. of Temp Wells	Depth of each (bgs) or to competent bedrock	DrillingTotal Depth	Hand Auger Total Depth	Visual Inspection Only	VOCs (8260)	SVOCs (8270)	GRO (Wi)	DRO (Wi)	RCRA Metals (6010)	TAL Metals (6010)	PCBs (8082)	pH (150.1)	Cyanide (335.4)	Waste Characterization[1]	VOCs (8260)	SVOCs (8270)	GRO (Wi)	DRO (Wi)	Dissolved RCRA Metals (6010)	Dissolved TAL Metals (6010)	PCBs (8082)	pH (150.1)	Waste Characterization[2]
WORK ELEMENT 1 - FOCUS AREA ASSESSMENT																														
3. Transformers 12A and 12B	53	3A	F2	1		1	10	10				2		2			2					1		1			1		
4. Substation	54	3A	H17		2		5		10			4		4			4												
5. Substation	55	3A	J26		2		5		10			4		4			4												
6. Transformers 6, 10 and 10A	56	3A	L34							Yes																			
7. Transformers 3 and 9	57	3A	AA17							Yes																			
8. Transformer #7	58	3B	C55							Yes																			
9. Railroad Spur	59	2A, 3A, 3B	A56-G56; G23-G40; P29-P41	4		2	10	40			8	8		8	8		5				1	1		1	1		1		
11. Bascale Bridges	64	3B	G35; G56-57	2		2	15	30			4	4		4	4		4				2	2		2	2		2		
13. Production Hydraulic Lifts	67	3A, 3B	B7, K30, K31. M28, M29, Rattle Shack								10	10		10			10				3	3		3			3		
17. Housekeeping Trenches	86	3A	M24-M27	3		1	20	60			6	6		6	6		6				1	1		1	1		1		
18. Liquid Collection Trench	88	3A, 3B	D39-D42; L24-L27	5		3	20	100			10	10		10	10		10				3	3		3	3		3		
19. Oil/Water Separators	89	3A, 3B	AA7-AA8; B42; M34; P15; Q5	5		5	20	100			10	10		10	10		10				5	5		5	5		5		
20. Process Equipment Trench	90	3B	N38-N39	2		1	10	20			4	4	4	4	4		4				1	1	1	1	1		1		
21. Sump	93	3A	J15	1		1	20	20			2	2		2	2		2				1	1		1	1		1		
22. Tank Farm Trenches	94	3A	Q17-R18	2		1	20	40			4	4	4	4	4		4				1	1	1	1	1		1		
23. Former Pits	97	2A, 3A, 3B	A7, B27, B28, D24, C40, C25, C19, F26, F28, G2, L27, M2, N31,P2	12		12	20	240			24	24		24		24	24		2		12	12		12		12	12		
24. Vaults	98	3A	H3	1		1	20	20			2	2		2	2		2				1	1		1	1		1		
30. Fluid Fill Area	107	3A	AA8 - AA19	3		2	10	30			6	6	6	6	6						2	2	2	2	2				
31. Hydraulic Lifts	108	3C	B3, C1, C2, D4, E2, Ge4, F5, D9, E9, F9, Ge9, C8n, C8s, D15, F17, B11								24	24		24							8	8		8			8		
32. Transformers 20A and 20B	110	3C	D9-E9							Yes																			
33. Transformers 21A, 21B and 21C	111	3C	B12-B13							Yes																			
34. Transformers 22A and 22B	112	3C	D17-E17							Yes																			
35. Transformers 23A and 23B	113	3C	Gw11	1		1	10	10				2		2			2					1		1			1		
36. Transformers 24A and 24B	114	3C	J11	1		1	10	10				2		2			2					1		1			1		
37. Phosphate System Trench	117	3C	A4-A19	4		2	15	60				8		8	8							2		2	2				
38. Paint Sludge Pit Sump	120	3C	Gw10	2		1	10	20			4					4					1					1			
39. Former Sulfuric Acid AST	126	3C	A2	1		1	10	10							2			2							1			1	
40. Former Transformers #11 and #11A	136	3D	B2-B5	1			15		15			2		2			2					1		1			1		
WORK ELEMENT 2 - IDW AND QA/QC SAMPLES																														
Characterization of Investigation-Derived Waste (IDW)																				2										1
QA/QC Samples																					2	3	1	2	1	1	2	1		
Totals				51	4	38	275	820	35	0	118	138	14	138	66	28	97	2	2	2	44	50	5	49	22	14	45	2	1

Notes:
Details associated with the drilling, soil and groundwater sampling activites for each Focus Areas are presented in Table 1. Investigation Summary - Interior Features
Indicates borings and/or wells are being advanced to evaluate multiple focus areas. Table may list additional analytical parameters.
*Temporary wells are to be installed only if evidence of impacts are observed in the soil samples.
[1] Waste Characterization samples will be analyzed for the following: TCLP VOCs, TCLP SVOCs, TCLP Metals, PCBs, Total sulfide and cyanide, Corrosivity, Flashpoint, and TCLP Pesticides/Herbizides. Concrete samples will not be analyzed for TCLP Pesticides/Herbicides
[2] Waste Characterization samples will be analyzed for the following: TCLP VOCs, TCLP SVOCs, and RCRA Metals.



LEGEND:

Ford Property Boundary

NOTES:

Imagery Source: United States Geological Survey
High Resolution Orthoimagery for the Minneapolis-St. Paul, Minnesota Urban Area

Topographic Map Source:
© 2007 National Geographic Society

0 1 2 Miles

1 inch equals 1 miles

Twin Cities Assembly Plant
Ford Motor Company
St. Paul, Minnesota

Site Location / Property Layout

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FIGURE 1

CITY: Minneapolis, MN DB: MGress PM: BZinda
Project # MN000563
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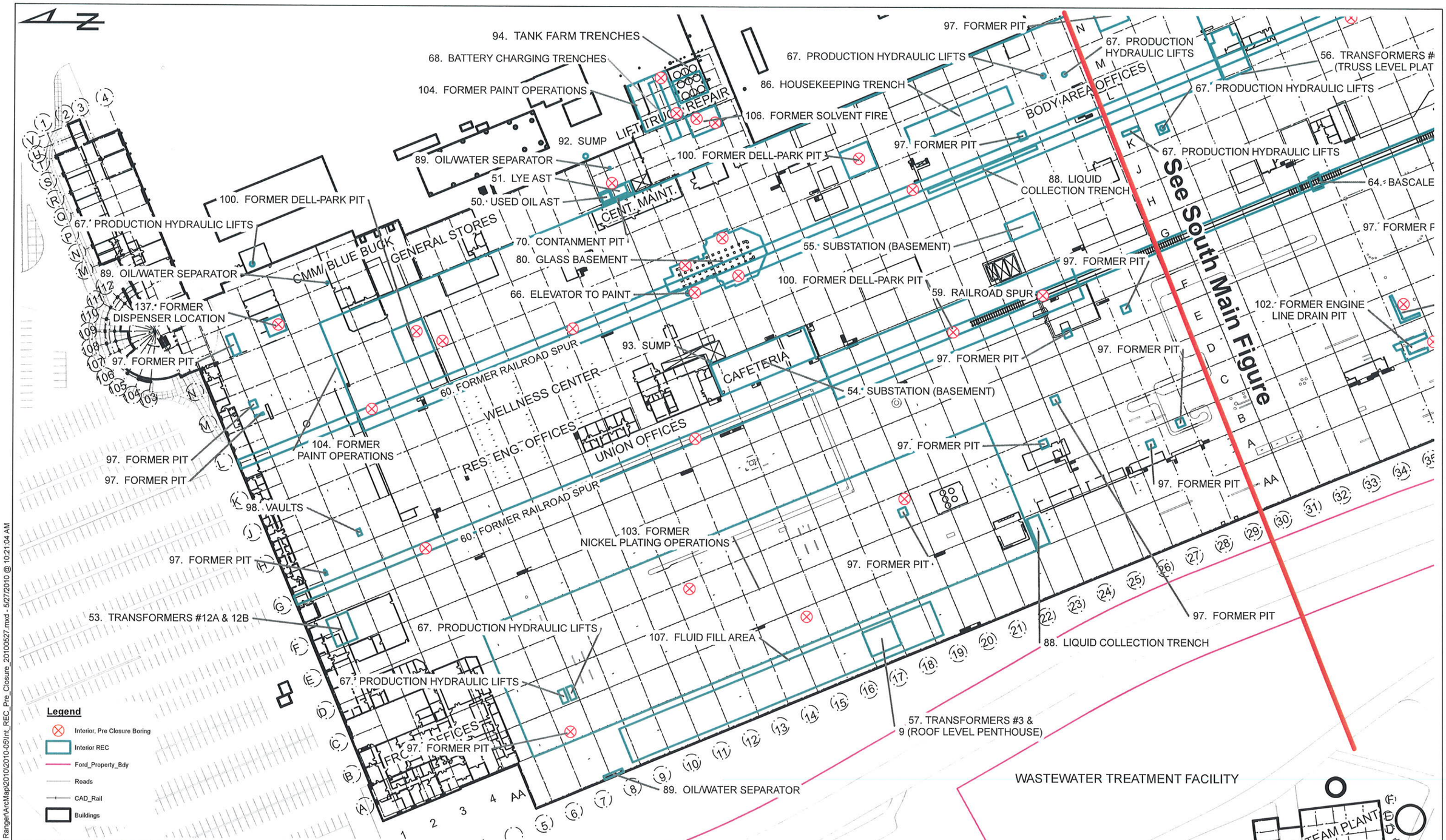

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ARCADIS
430 First Avenue North, Suite 720
Minneapolis, Minnesota 55401
Tel: (612) 339-9434 Fax (612) 336-4538

0 75 150 300 Feet

Interior REC
North - Main Assembly Building
Ford Twin Cities Assembly Plant
St. Paul, Minnesota

PROJECT MANAGER	ASSISTANT PROJECT MANAGER
E. Garman	B. Zinda
DRAWN	CHECKED
M. Gress	T. Nelson-Kalmes
PROJECT NUMBER	DRAWING NUMBER
MN000591.0001	2A

N

DIESEL SHACK

59. RAILROAD SPUR

FRAME BUILDING

90. PROCESS EQUIPMENT TRENCH

89. OIL/WATER SEPARATOR

60. FORMER RAILROAD SPUR

97. FORMER PIT

67. PRODUCTION HYDRAULIC LIFTS

56. TRANSFORMERS #6A,10,10A (TRUSS LEVEL PLATFORM)

BODY AREA OFFICES

67. PRODUCTION HYDRAULIC LIFTS

59. RAILROAD SPUR

88. LIQUID COLLECTION TRENCH

64. BASCALE BRIDGE

64. BASCALE BRIDGE

WAREHOUSE

59. RAILROAD SPUR

58. TRANSFORMER #7 (ROOF LEVEL PENTHOUSE)

DOCK

97. FORMER PIT

89. OIL/WATER SEPARATOR

ASRS ENCLOSURE

102. FORMER ENGINE LINE DRAIN PIT

102. FORMER ENGINE LINE DRAIN PIT

102. FORMER ENGINE LINE DRAIN PIT

97. FORMER PIT

97. FORMER PIT

97. FORMER PIT

59. RAILROAD SPUR

97. FORMER PIT

97. FORMER PIT

See North Main Figure

Legend

- Interior, Pre Closure Boring
- Interior REC
- Ford_Property_Bdy
- Roads
- CAD_Rail
- Buildings

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0 75 150 300 Feet

Interior REC
South - Main Assembly Building
Ford Twin Cities Assembly Plant
St. Paul, Minnesota

PROJECT MANAGER	ASSISTANT PROJECT MANAGER
C. Carman	B. Zinda
DRAWN	CHECKED
M. Gress	T. Nelson-Kalmes
PROJECT NUMBER	DRAWING NUMBER
MN000591.0001	2B

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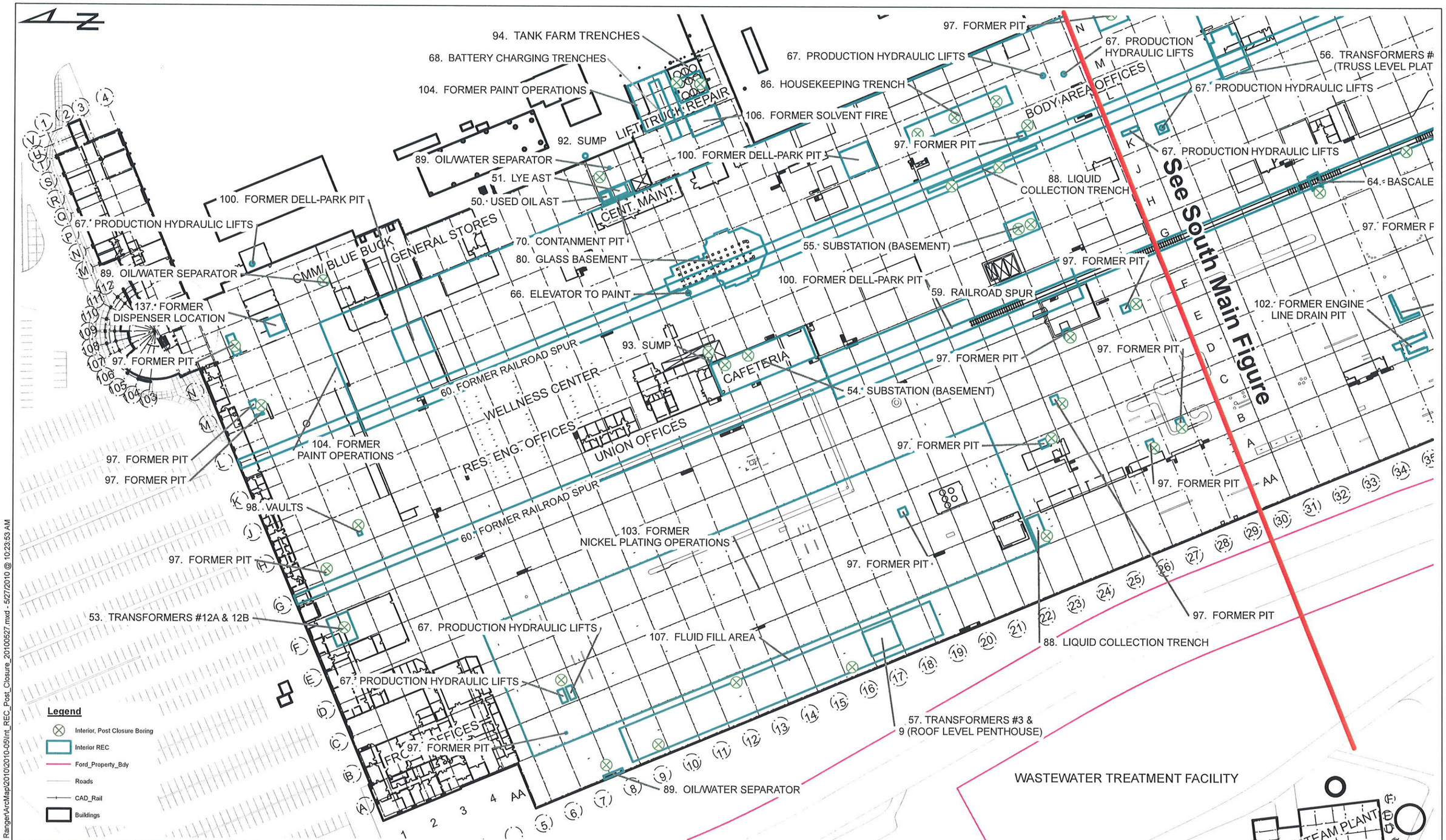

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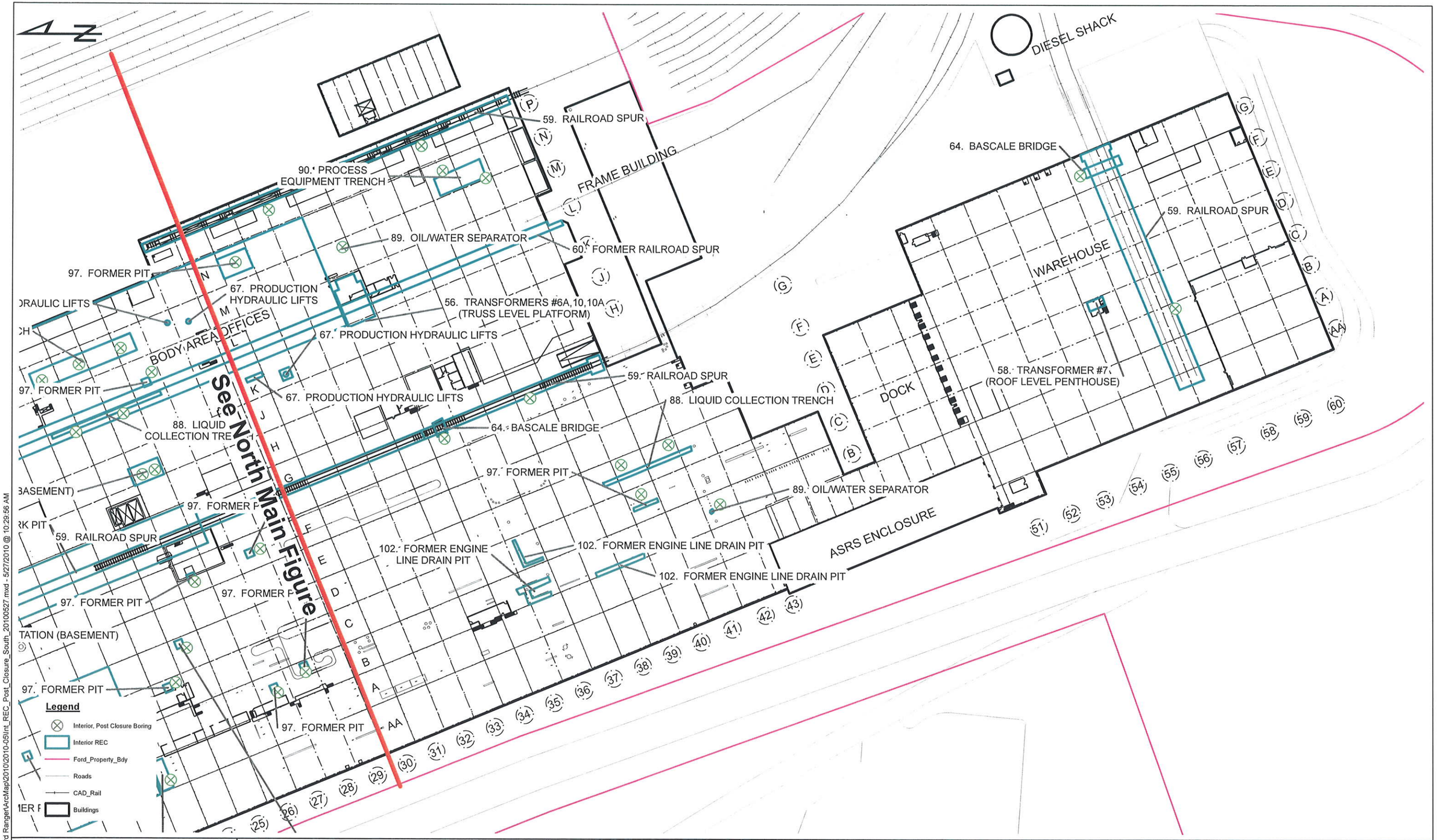
0 75 150 300 Feet

Interior REC, Auxiliary
North - Main Assembly Building
Ford Twin Cities Assembly Plant
St. Paul, Minnesota

PROJECT MANAGER	ASSISTANT PROJECT MANAGER
E. Garman	B. Zinda
DRAWN	CHECKED
M. Gress	T. Nelson-Kalmes
PROJECT NUMBER	DRAWING NUMBER
MN000591.0001	3A



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ARCADIS
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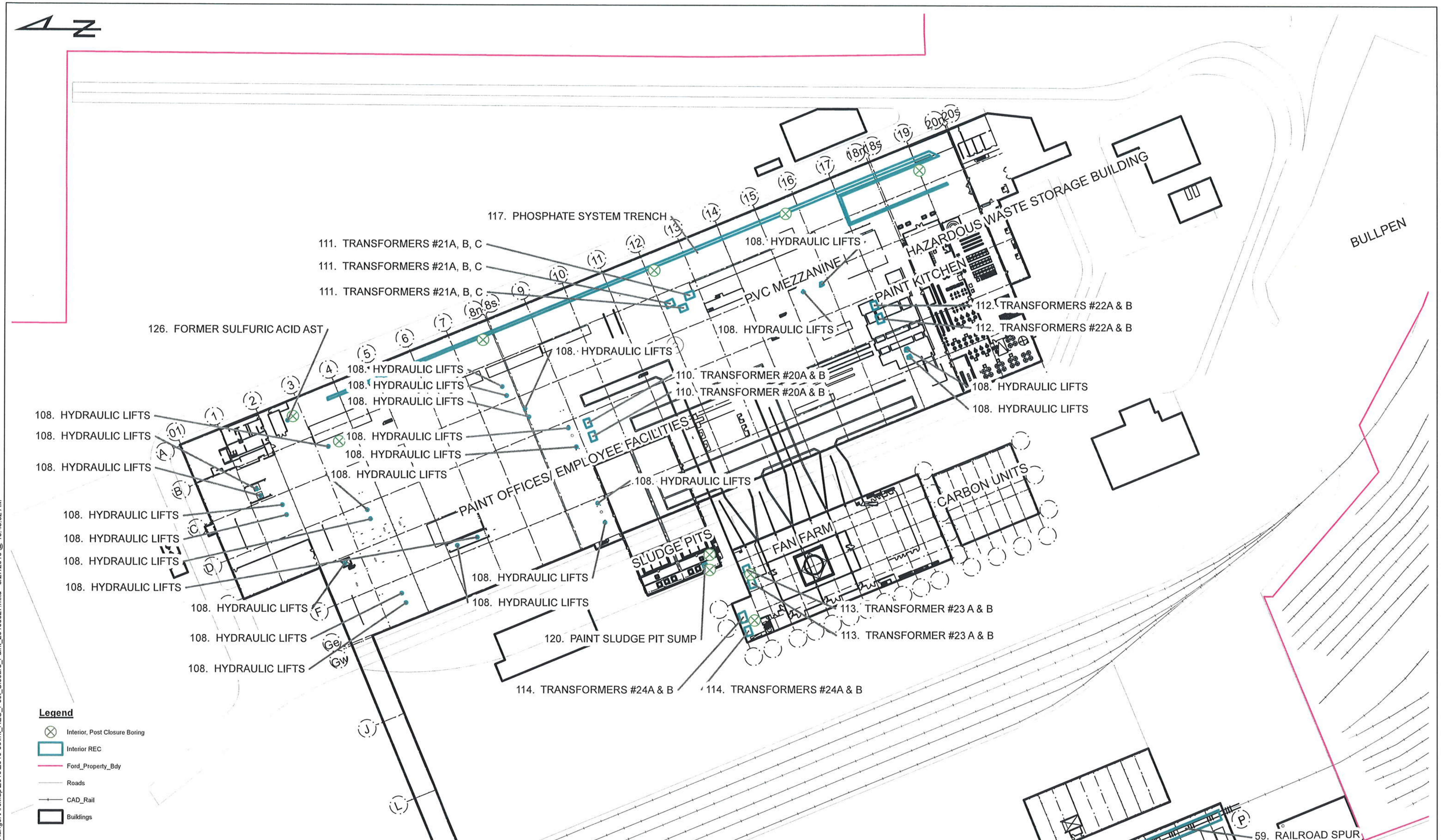
0 75 150 300 Feet

Interior REC, Auxiliary
South - Main Assembly Building
Ford Twin Cities Assembly Plant
St. Paul, Minnesota

PROJECT MANAGER	ASSISTANT PROJECT MANAGER
E. Carman	B. Zinda
DRAWN	CHECKED
M. Gress	T. Nelson-Kalmes
PROJECT NUMBER	DRAWING NUMBER
MN000591.0001	3B



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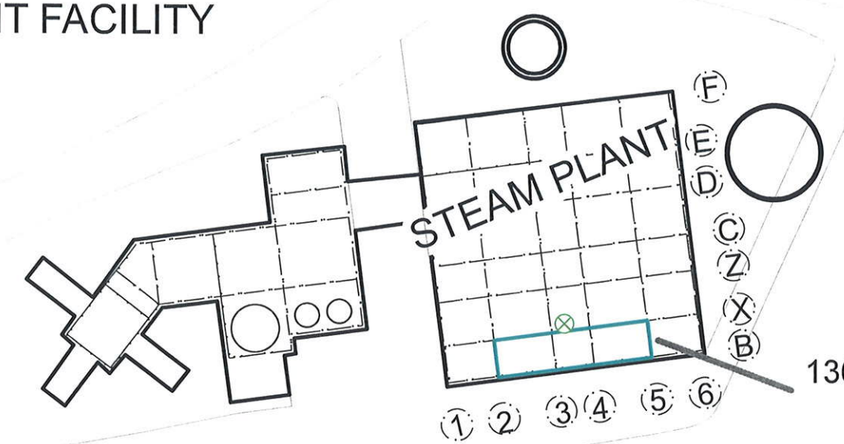
Interior REC, Auxiliary Paint Building
Ford Twin Cities Assembly Plant
St. Paul, Minnesota

PROJECT MANAGER: E. Carman	ASSISTANT PROJECT MANAGER: B. Zinda
DRAWN: M. Gress	CHECKED: T. Nelson-Kalmes
PROJECT NUMBER: MN000591.0001	DRAWING NUMBER: 3C

S #3 &
HOUSE)

WASTEWATER TREATMENT FACILITY



136. FORMER TRANSFORMERS #11
& 11A (1ST FLOOR)

PUMP HOUSE

Legend

- Interior, Post Closure Boring
- Interior REC
- Ford_Property_Bdy
- Roads
- CAD_Rail
- Buildings

ARCADIS
430 First Avenue North, Suite 720
Minneapolis, Minnesota 55401
Tel: (612) 339-9434 Fax (612) 336-4538

0 37.5 75 150 Feet

Interior REC, Auxiliary
Steam Plant
Ford Twin Cities Assembly Plant
St. Paul, Minnesota

PROJECT MANAGER E. Carman	ASSISTANT PROJECT MANAGER B. Zinda
DRAWN M. Gress	CHECKED T. Nelson-Kalmes
PROJECT NUMBER MN000591.0001	DRAWING NUMBER 3D

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