INVENTUM ENGINEERING, PC

March 19, 2020

To: Benjamin McPherson (NYSDEC)

From: Todd Waldrop (Inventum)

CC: Jon Williams (Riverview); John Yensan (OSC); Craig Slater (CS Law); John Black, P.E. and James Edwards (Inventum)

RE: Light Oil Area Storm Water Characterization Sampling Work Plan
Riverview Innovation & Technology Campus, Inc.
Brownfield Cleanup Program Site No. C915353
Town of Tonawanda, New York

Inventum Engineering, P.C. (Engineering), on behalf of Riverview Innovation & Technology Campus, Inc. (Riverview), is submitting this Light Oil Area Storm Water Characterization Sampling Work Plan (work plan) to the New York State Department of Environmental Conservation (NYSDEC) for the Riverview Brownfield Cleanup Program (BCP) Site (#C915353) located at 3875 River Road, Tonawanda, New York.

Purpose

The concrete walled light oil processing secondary containment area surrounding the former light oil storage tanks PT-04[1], PT-12, and PT-13 (nomenclature designated for site management purposes) provided spill protection while the Tonawanda Coke facility was in operation.

- In the former Light Oil Area (Attachment A):
  - PT-04 was labeled "abandoned" in the 2010 drawing. In the circa 1982 drawing (T-R-70-F) the tank was identified as a Wash Oil Circulating Tank (16,000 gallon).
  - PT-12 was labeled "abandoned" in the 2010 drawing. In the circa 1982 drawing (T-R-70-F) the tank was identified as a Wash Oil Decanter Tank (20,000 gallon).
  - PT-13 was labeled "abandoned" in the 2010 drawing. In the circa 1982 drawing (Attached T-R-70-F) the tank was identified as a Muck Tank (6,000 gallon).

The concrete walled former ammonia concentrating area secondary containment surrounding the former caustic and ammonia storage tanks PT-02, PT-03, ST01 and ST-02 (nomenclature designated for site management purposes) provided spill protection while the Tonawanda Coke facility was in operation.

- In the Ammonia Concentrating Area:
  - PT-02 and PT-03 were weak ammonia liquor storage tanks in both the 2010 and circa 1982 drawings. Both are 174,000-gallon capacity.

[1] Note: It has been determined that the designations PT and ST were not assigned by staff familiar with the plant or operations. Many storage tanks are designated with PT and several process tanks are designated with ST.

- ST01 was labeled "abandoned" in the 2010 drawing (Attached). The tank did not exist at the time the circa 1982 drawing was developed.
- ST02 was labeled "caustic storage tank" in the 2010 drawing (Attached). The tank did not exist at the time the circa 1982 drawing was developed.

The contents[2] of the tanks, if any, within the secondary containment are not in contact with the stormwater; however, the secondary containment area contains debris and rubble, and does not appear to have been carefully maintained by the previous owner. Riverview intends to clean the light oil secondary containment area as part of a general housekeeping and site safety and security plan for the BCP Site (to be submitted under separate cover). Prior to being able to clean this area, stormwater contained within the secondary containment must be characterized and managed in accordance with existing permits that allow for discharge of treated stormwater from diked/bermed areas. As managed during the emergency response, treatment of this water has been allowing settling in the secondary containment. It is Inventum's intent and position that after the light oil processing secondary containment area has been cleaned and decontaminated, stormwater accumulated within the limits may be managed under the requirements of the Stormwater Water Pollution Prevention Plan (SWPPP) currently being prepared for the BCP Site.

Accumulated water from precipitation must be periodically removed to eliminate a safety hazard associated with access to electrical equipment in the containment and allow access to remove debris and rubble. There is an estimated 45,000 gallons of water in the secondary containment around PT-02 and PT-03 (maximum depth of 1.5 feet with water over approximately 55 percent of the area) and 7,500 gallons of water in the secondary containment around PT04, PT-12 and PT-13 (maximum depth of 8 inches with water over 80 percent of the secondary containment). While the water in the containment is from precipitation and not a process, the debris, rubble, and other materials in the secondary containment are in contact with the accumulated water. The material, if any, contained in the former Wash Oil Circulating Tank (PT-04), Wash Oil Decanter tank (PT-12) , and the "Muck" Tank (PT-13) may meet the definition of a K-143 listed hazardous waste under 6NYCRR Part 371 and 40 CFR §261.32; however, there is no contact between precipitation and the contents of the tanks. There are no known listed wastes in the secondary containment area outside of the tanks, and therefore the water in the secondary containment is not a listed waste. During the characterization program the exterior condition of the three tanks will be inspected to verify there have been no releases to the secondary containment. This inspection will also assess the condition of all piping and other appurtenances that are associated with the tanks and present within the secondary containment area. Based on this inspection, and in consultation with NYSDEC, a final determination will be made regarding the presence of listed hazardous wastes in either of the secondary containment areas.

The materials within the secondary containment, until removed and cleaned, will be discharged to the Town of Tonawanda sewer system in accordance with Riverview's existing permit (Industrial Sewer Connection Permit No. 331). Secondary containment water after sampling and decontamination will be managed in accordance with an approved BCP Site SWPPP. In order to verify that the water is suitable for discharge to the sewer, Inventum proposes the collection of surface water samples from the accumulated water in the secondary containment area. The samples will include two tiers of sampling to

[2] The tanks in the light oil area were labeled as "abandoned" in a set of 2010 drawings. The contents, if any, will be tested during and IRM or the RI.

allow a determination of applicable requirements prior to transfer to the Town of Tonawanda sewer system. The first tier will confirm the water does not exhibit the characteristic of a hazardous waste and the second tier will provide data to confirm the discharge of the water does not have the potential to cause a violation of our discharge criteria at the permitted outfall.

Scope of Work

Inventum will notify the NYSDEC no less than 5 days prior to sampling. Sample bottles will be ordered from and analyses conducted by Paradigm Laboratories. If approved, Inventum is proposing to sample on March 24, 2020.

Four (4) samples of water will be collected from within the secondary containment areas shown on Figure 1. Two (2) samples will be collected from the secondary containment enclosing former process tanks PT-04, PT-12, and PT-13 and two (2) samples will be collected from the secondary containment area enclosing former process tanks PT-02 and PT-03. The locations will be selected based on examination of the accumulated liquids on the day of sampling.

Representative water samples will be collected using a new disposable polypropylene dipper cup affixed to a telescoping rod or a new disposable 1-foot polyethylene bailer secured with nylon rope. All reusable sampling equipment that has the potential to be in contact with the sample will be decontaminated with an Alconox wash and a distilled water rinse. This decontamination water will be discharged to the Town of Tonawanda sewer system in accordance with Riverview's existing permit (Industrial Sewer Connection Permit No. 331).

Additionally, and after the water samples have been collected, two (2) samples will be collected from solid material, including tar (if present), from the base of the secondary containment areas. One (1) sample will be collected from the secondary containment enclosing former process tanks PT-04, PT-12, and PT-13 and one (1) sample from the secondary containment area enclosing former process tanks PT-02 and PT-03. When sampling the solid materials in the secondary containment the sampled materials will be carefully described. To the extent there are materials that can be managed independently, they will be inventoried for the relative locations. Materials below the water surface will be investigated by collecting a sample for visual and olfactory observation with a new disposable dipper cup. The material will also be screened with a photoionization detector (PID) equipped with a 10.6 eV lamp. Figure 1 will be annotated with the locations of the distinct materials, their visual and olfactory characteristics, and the estimated thickness.

Representative solids samples will be collected using a pre-cleaned and disposable polypropylene dipper cup affixed to a telescoping rod, a dedicated trowel, or disposable stainless-steel spoons. All reusable sampling equipment that has the potential to be in contact with the sample will be decontaminated with an Alconox wash and a distilled water rinse. This decontamination water will be discharged to the Town of Tonawanda sewer system in accordance with Riverview's existing permit (Industrial Sewer Connection Permit No. 331).

After the VOC vials are filled, water will be field screened for pH and temperature using an Oakton pH meter. Sample (water and solid) will be collected for the following analysis:

- Tier 1 - Characterization
    - Toxicity Characteristic Leaching Procedure (TCLP) using EPA Method 1311 for:

        - SVOCs using EPA Method 8270D[4]
        - VOCs using EPA Method 8260C[5]
        - Resource Conversation and Recovery Act (RCRA) Metals using EPA Method 6010C
        - Mercury using EPA Method 7470A
        - Pesticides using EPA Method 8081B
        - Herbicides using EPA Method 8151A
    - Polychlorinated Biphenyls (PCBs) using EPA Method 8082A
    - Flash Point using EPA Method 1010A
    - pH using EPA Method 9045D[6]
    - Reactivity, Cyanide using EPA Method 7.3.4.2 reference
    - Reactivity, Sulfide using EPA Method 7.3.4.3 reference
- Tier 2 - Discharge Water Quality
    - Target Compound List (TCL) Semi-Volatile Organic Compounds (SVOCs) using EPA Method 8270D
    - TCL Volatile Organic Compounds (VOCs) using EPA Method 8260C

Samples will be delivered under chain-of-custody procedures to Paradigm Environmental Services, Inc of Rochester, New York (ELAP ID# 10958). Laboratory reporting will include a NYSDEC Category A deliverable and EDD.

Reporting

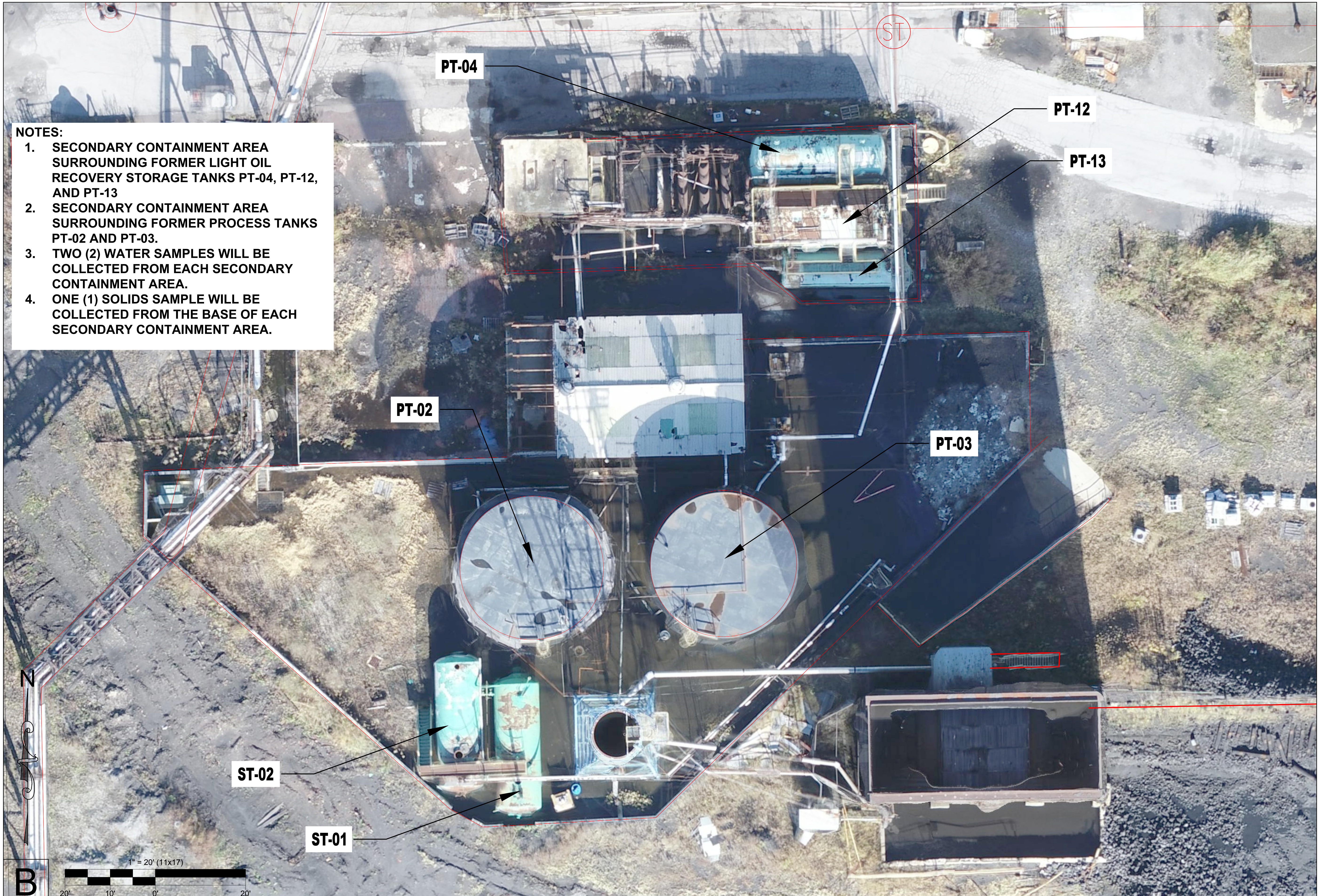
Inventum will submit a letter report to the NYSDEC within 10-days of sample collection. The summary report will include material disposal/treatment recommendations supported by a tabulated summary of the data, a figure showing the sample locations, photographs and an appendix with the laboratory report.

[4] The TCLP will only apply to water samples will only be analyzed if the sample contains greater than 0.5% solids. Tier 2 TCL SVOC analysis will be used for waste characterization if the material is 99.5% liquid or more.
[5] The TCLP will only apply to water samples will water samples will only be analyzed if the sample contains greater than 0.5% solids. Tier 2 TCL VOC analysis will be used for waste characterization if the material is 99.5% liquid or more.
[6] If any free liquid releases from the solid samples.

Figure

NOTES:

1. SECONDARY CONTAINMENT AREA SURROUNDING FORMER LIGHT OIL RECOVERY STORAGE TANKS PT-04, PT-12, AND PT-13
2. SECONDARY CONTAINMENT AREA SURROUNDING FORMER PROCESS TANKS PT-02 AND PT-03.
3. TWO (2) WATER SAMPLES WILL BE COLLECTED FROM EACH SECONDARY CONTAINMENT AREA.
4. ONE (1) SOLIDS SAMPLE WILL BE COLLECTED FROM THE BASE OF EACH SECONDARY CONTAINMENT AREA.



DRAWING BY	
CHECKED	
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FIGURE 1
LIGHT OIL PROCESS TANKS
SECONDARY CONTAINMENT AREA
WASTE CHARACTERIZATION
WORK PLAN

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481 CARLISLE DRIVE
SUITE 202
HERNDON, VIRGINIA 20170
(703) 722-6049
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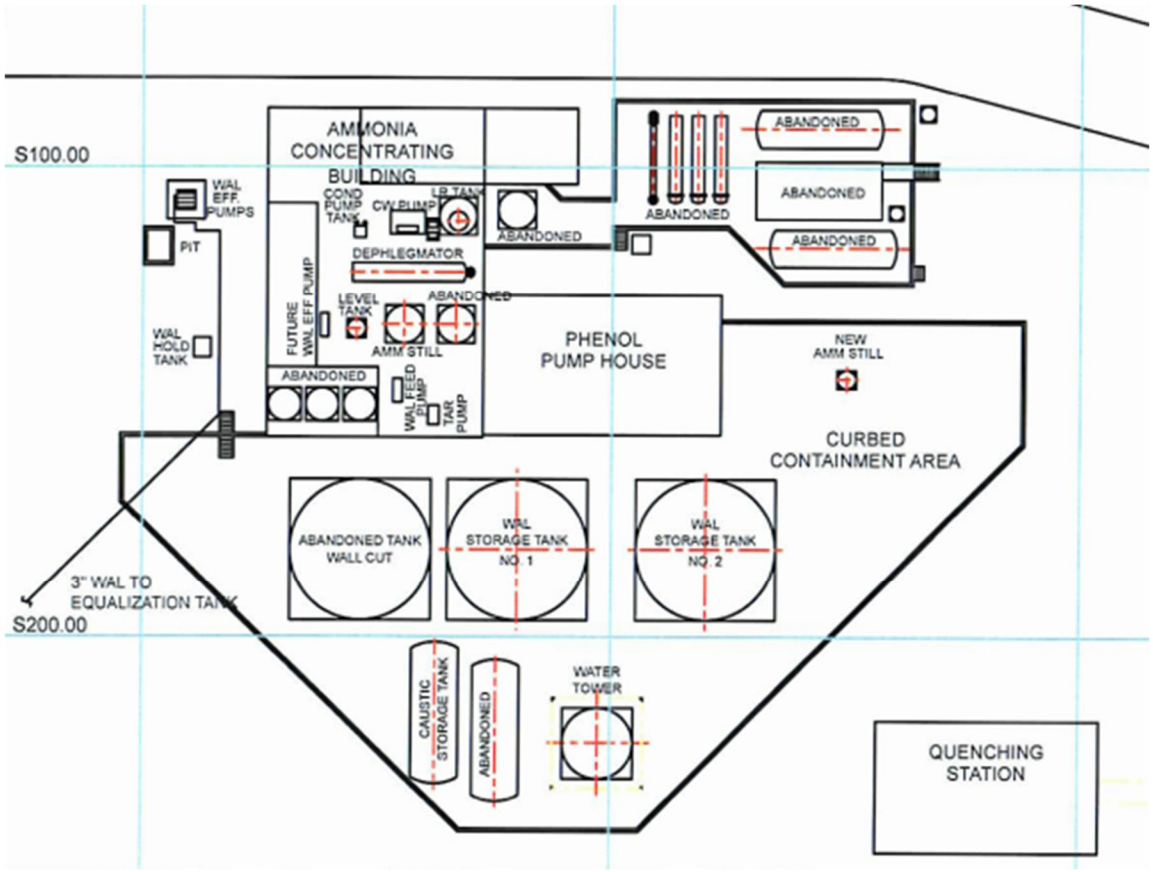
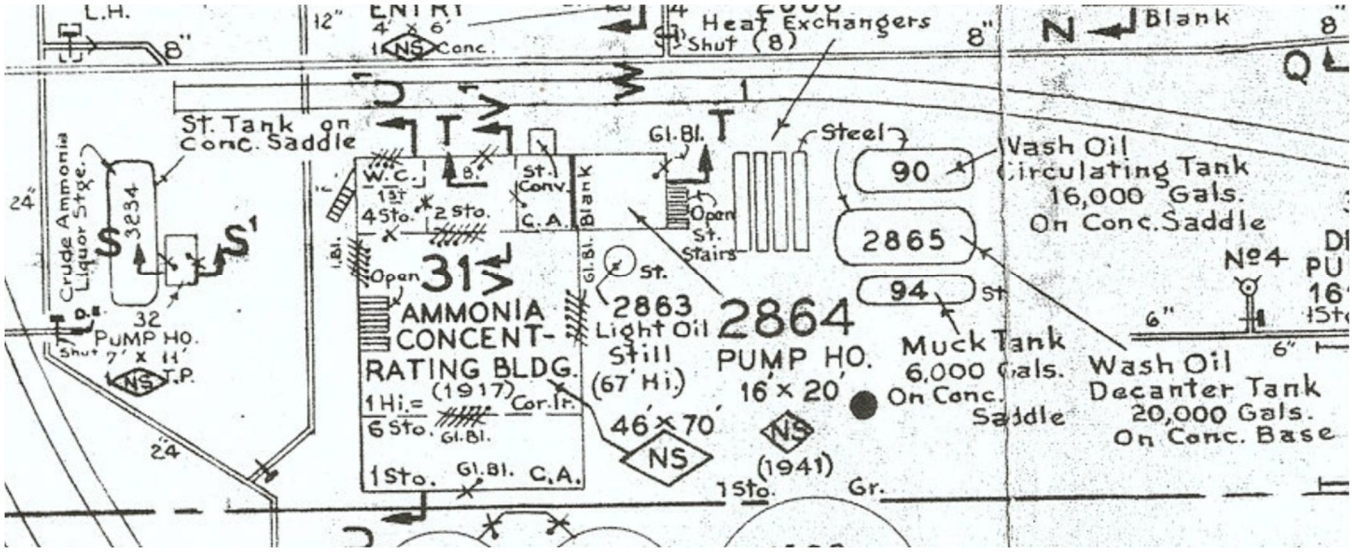
FIGURE 1
DRAWING NUMBER

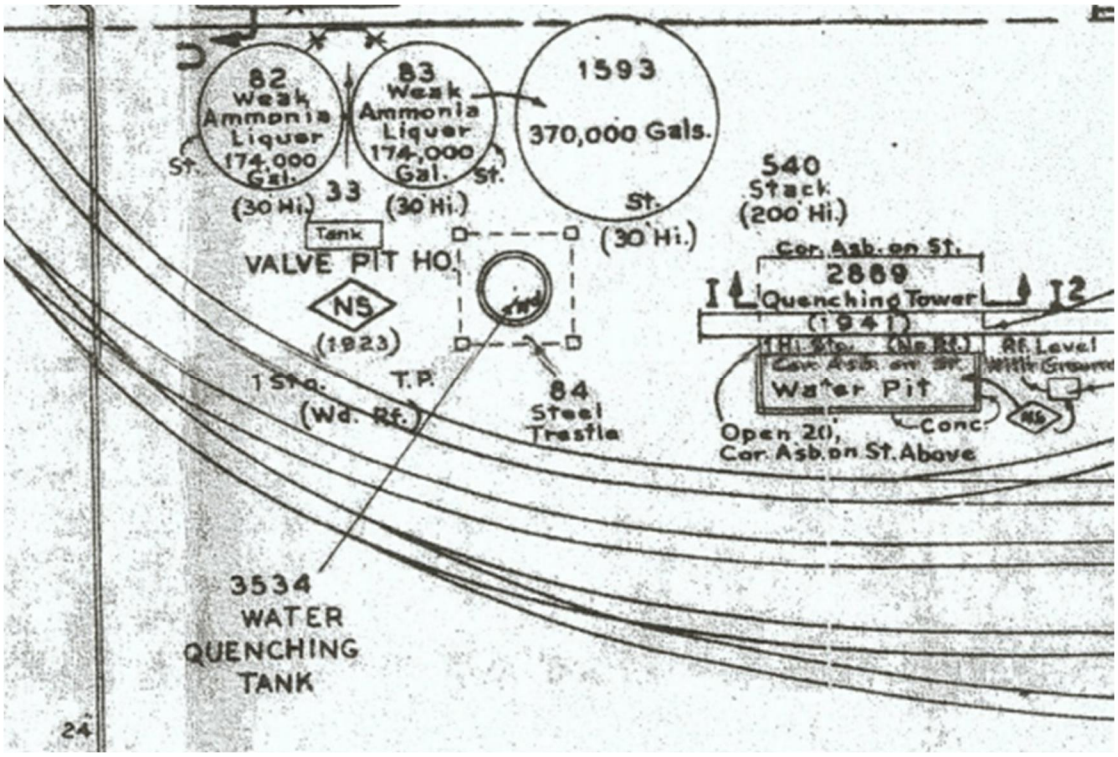
Attachment A



Source
General Plot Plan
Ammonia Concentrating and Light Oil Areas
T-BP-0250
30 Dec 2010



Source
T-R-70-F
n.d. (circa 1982)



Source
T-R-72-F
n.d.(circa 1982)