GRAFTech International

2021 PERIODIC REVIEW REPORT

and

ANNUAL SITE MANAGEMENT PLAN (SMP) REPORT

for the

CLOSED LANDFILL SITE SWMF #32N03

(Formerly UCAR Carbon Company, Republic Site Registry No. 932035)

(Per the SMP Approved October 29, 2018)

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1. Introduction

This Periodic Review Report (PRR) is being submitted for the GrafTech International Holdings Inc. (GrafTech) (formerly UCAR Carbon Company Inc.) closed landfill facility, SWMF #32N03 (Registry No. 932035) ("Landfill" or "Site"), under the provisions of the New York State Department of Environmental Conservation (NYSDEC) Division of Environmental Remediation (DER) Inactive Hazardous Waste Site Program. The Landfill is located in the Town of Niagara, Niagara County, State of New York, on Parcel Number 130.20-1.1. The Site is located off Hyde Boulevard behind the former UCAR Carbon Republic Plant. The Site is comprised of a 16.48-acre capped landfill on 61.60 acres of undeveloped land. A Site Plan is presented as Figure 1.

The 16.48-acre landfill was closed in accordance with a NYSDEC-approved closure plan under Part 360 Solid Waste Management Facility (SWMF) Guidelines, which included the installation of an engineered cap, completed in June 1987. A Preliminary Site Assessment (PSA) report was issued in April of 1995. The assessment involved the entire property in order to effectively characterize the Landfill and any on-site or off-site contaminant migration. Based on the results of the PSA, the state made a "no significant threat" determination and reclassified the Landfill in 1997 from Class 2a to a Class 4 Inactive Hazardous Waste Site. There have been no required remedial programs or remedial objectives established for this Site. GrafTech has continued to monitor the groundwater quality and implement the established institutional/engineered controls (IC/EC) at the Site, discussed in more detail in Sections 2.0 and 3.1, for over 30 years.

Prior to May 2016, this Site was being managed under the state programs of both the DER and the Division of Materials Management (DMM). On May 25, 2016, NYSDEC communicated to GrafTech that, going forward, the Site would be managed solely by the DER, thereby eliminating some prior reporting and oversight redundancies.

GrafTech voluntarily submitted a proposed Site Management Plan (SMP) to NYSDEC Region 9 on December 17, 2013, to bring the Plan in line with the state's Technical Guidance for Site Investigation and Remediation, DER 10. The more comprehensive SMP incorporated and replaced the prior Operation, Maintenance and Monitoring (OM&M) Plan, which the state had previously approved on November 4, 2009. NYSDEC issued a letter on November 17, 2016, approving GrafTech's proposed December 2013 SMP; the only change being that GrafTech would no longer be required to submit a separate annual groundwater monitoring report to the DMM.

The PRR for Reporting Year 2017 submitted in January 2018 included a request to downsize the groundwater monitoring plan and reduce the number of parameters that would be analyzed. NYSDEC issued the Site Management (SM) Periodic Review Report (PRR) Response Letter dated February 8, 2018, which approved GrafTech's proposal for a modified sampling program to only include sampling of monitoring wells BW-3, GW-8B and BW-4 with analysis of only volatile organic compounds (VOCs). Based on approval of the modified sampling program, GrafTech submitted a revised SMP dated October 23, 2018, to include the updated monitoring program requirements and to bring the SMP in line with the NYSDEC recommended SMP format. NYSDEC subsequently issued a letter dated October 29, 2018 accepting GrafTech's revised SMP.

The NYSDEC-approved SMP specifies the routine site inspection, maintenance and groundwater monitoring programs, and outlines the reporting and record retention requirements for the Site. In addition, the SMP describes provisions for an approved Excavation Plan to manage potentially contaminated soils at the Site in the event that GrafTech has future plans to excavate soil from any areas outside the footprint of the Landfill.

The purpose of this PRR is to document GrafTech's implementation and conformance with the post closure care procedures and Institutional Controls (IC)/Engineering Controls (EC) outlined in the SMP. This PRR covers the period of January 1, 2021 through December 31, 2021. It should be noted that, in past agreement with Mr. Michael Hinton, NYSDEC, DER, Region 9, the annual SMP compliance report for this Site is incorporated in this annual PRR to eliminate unnecessary redundancy.

For the report period specified above, GrafTech has designated the GrafTech Corporate Health, Safety and Environmental Protection (HS&EP) Manager, to be responsible for managing the Site. This position is currently filled by Ms. Julianne Snyder, who is located at the GrafTech Corporate Headquarters, 982 Keynote Circle, Brooklyn Heights, Ohio 44131. In addition, GrafTech has also contracted the services of National Maintenance Contracting Corporation (NMCC), a local general maintenance contractor, to act as the local point of-contact for the Site. NMCC is responsible for managing the routine operations at the Landfill, including site security; conducting the routine site inspections according to the schedule and protocols established in the SMP; completing or arranging for any needed maintenance and/or repairs at the Site; escorting approved visitors at the Site such as environmental contractors commissioned by GrafTech; responding to neighborhood requests, etc. All NMCC activities are supervised by Ms. Snyder.

NMCC is also responsible for communicating to Ms. Snyder whenever a significant event took place that could have possibly prevented full conformance with the SMP, or for any other important matters concerning the Landfill outside the scope of this Plan.

Ms. Snyder has been granted the authority by GrafTech to requisition the necessary resources so that appropriate corrective actions can then be promptly implemented to adequately address any identified deficiency and ensure full conformance with the provisions of the SMP.

2. Institutional Controls and Engineering Controls (IC/EC)

There is no required Remedial Program or remedial objectives for this Site.

2.1. Engineering Controls (EC)

The EC in place at the Landfill include a physical barrier installed in 1987, which is an engineered cap to contain and eliminate potential exposure pathways to the contaminants in the waste disposal area, and a groundwater monitoring well network. Another EC employed at the Site is a security system designed to prevent unauthorized access, which consists of an eight (8) foot high metal hurricane-style perimeter fence and two (2) locked gates. In addition, the casings on the groundwater monitoring wells are equipped with locking devices and padlocks to prevent unauthorized access and potential contamination to groundwater. These engineering controls were routinely inspected and repaired/replaced, as needed, to ensure that unauthorized access was restricted. The padlocks were kept locked except when drawing groundwater samples or when performing internal inspections of the monitoring wells.

As detailed in the Final Landfill Closure report[1], the engineered cap is a low-permeability cap installed over the entire 16.48-acre Site, except for the wooded areas. The final cover consists of a 6-inch thick topsoil layer with vegetative cover (grass) overlying a 3-inch thick sand/gravel layer (drainage layer) overlying an 18-inch thick clay layer. The clay was placed and compacted to a hydraulic conductivity of less than 1×10^{-7} cm/sec. At the edge of the waste disposal area, the clay cover was keyed approximately two feet into the existing native fine-grained soils or to the top of bedrock, whichever was encountered first. The drainage layer was spread over the entire clay cap to laterally drain precipitation and reduce infiltration. The sand used for the drainage layer was obtained from Niagara Stone No. 1B. Geotechnical testing completed on this sand during source selection yielded a maximum hydraulic conductivity of 2.68×10^{-2} cm/sec. The topsoil layer was placed on top of the drainage layer and was seeded with a persistent vegetative species that was selected to effectively minimize erosion. The vegetative cover has a shallow root system which should not penetrate beyond the lateral drainage layer. The topsoil is a fertile loamy material obtained from an abandoned cornfield at Shevlin-Manning's mining operation.

The surface slope of the final cover was designed at 3 percent slope. The final slope varies slightly across the cover in order to accommodate the total amount of fill, but does not

[1] Final Landfill Closure, Solid Waste Management Facility, Union Carbide Corporation, Republic Plant, Town of Niagara, New York, prepared by Conestoga-Rovers & Associates for Union Carbide Corporation, dated September 1987.

exceed 5 percent and is not less than 2 percent. Side slopes around the landfill portions of the Site are at a 3:1 slope (33 percent) or less.

The western area of the SWMF was never used for waste disposal, but was covered with a thin layer of carbonaceous material. This area was regraded and capped at a 2 percent slope with final contour elevations matching existing ground elevations around the perimeter of the Site. In order to accomplish this, the thickness of the clay, drainage, and topsoil layers was reduced over the last 100 feet to a total thickness of approximately 1.5 feet toward the edge of the Site. Surface water at the Site is allowed to follow natural drainage paths, given the slopes and runoff characteristics of the Site, engineered cap, and surrounding area. This decision was made at the time of closure and is further described in the closure report. There are no additional erosion/drainage controls in place at the Site.

2.2. Institutional Controls (IC)

The IC at this Site is the implementation of the SMP, including the Operation and Monitoring Plan discussed below, which specifies the groundwater monitoring program; the routine facility inspections for the engineered cap and the security features of the Site; maintenance of the Site; and the recordkeeping and reporting requirements. These inspection and groundwater monitoring programs were conducted in 2021 in accordance with the state-approved SMP to ensure the EC remained in place, were properly maintained and continued to be effective.

Under the previous and current NYSDEC approved groundwater monitoring program for the Landfill, one (1) sampling event must occur in every calendar year; scheduling of the sample collection must be rotated every year between spring (every odd year) and fall (every even year). Groundwater elevation measurements are also recorded during each annual sampling campaign.

Annual groundwater monitoring for the identified Contaminants of Concern (COCs) was conducted per the rotating schedule established in the SMP, which in this compliance period was a spring sampling campaign for an odd numbered year. Further details of the 2021 groundwater monitoring program are provided below in subsection 3.1 – Groundwater Monitoring.

No soil vapor monitoring program is required for the Landfill. In May 2007, Graftech submitted a Soil Intrusion Evaluation Report to the NYSDEC, which concluded that there is no threat to neighboring residential properties, and recommended that no further action regarding vapor studies was warranted. NYSDEC and NYSDOH informed Graftech on December 28, 2008, that they had reviewed the report and agreed that no further action

was needed regarding soil vapor intrusion. No vapor intrusion monitoring program is required at the landfill.

Inspections of the Site were performed and documented weekly and quarterly in accordance with the approved SMP. Further details of the 2021 site inspection programs are provided below in subsection 3.3 – Site Inspections and Records.

3. Operations and Monitoring (O&M) Plan

3.1. Groundwater Monitoring

Overview of the Historical Annual Groundwater Monitoring Program for the Landfill

The Landfill was capped and closed in 1987. The groundwater monitoring well network at the Landfill site currently consists of 11 active on-site wells; three (3) of which are sampled for analysis annually (BW-3, BW-4, and GW-8B) and another eight (8) of which are only subject to hydraulic monitoring requirements (BW-1, BW-2, BW-5, BW-6, GW-9B, MW-1, MW-2, and MW-3). Water levels were collected from all 11 active wells in 2021. In addition, there are seven (7) inactive groundwater wells (WW-1, OW-1, OW-2, GW-7B, GW-8A, GW-9A, and GW-11B), which are included in the Site inspection program only and are not subject to chemical or hydraulic monitoring. However, water levels were collected from inactive bedrock groundwater wells GW-7B and GW-11B in 2021 on a voluntary basis in order to better understand bedrock groundwater flow direction east of the landfill. Water levels will also be collected from these two additional wells on a voluntary basis during the next hydraulic monitoring event, which is scheduled for fall 2022. A table listing the active and inactive monitoring wells and associated monitoring well details is presented as Table 1. Elevations of the top of riser, top of outer casing (where present), and ground surface at each of the 11 active wells and at the two inactive bedrock wells GW-7B and GW-11B were last surveyed on June 1, 2020. Table 1 also lists the full names of these wells, which appear on Site drawings and other documents. The abbreviated well names are used within this document. The locations of the groundwater monitoring wells are shown on Figure 1.

Groundwater monitoring wells GW-10A and GW-10B are located outside the Landfill perimeter security fencing on neighboring property not owned by GrafTech. Following GrafTech's request during a state inspection of the Landfill in May 2010, NYSDEC subsequently reviewed the PSA records and confirmed that NYSDEC had installed and still owns these two (2) wells. Thus, GrafTech is not responsible to secure, maintain or sample these wells and, therefore, they were not covered under the SMP.

The history of the groundwater monitoring program is as follows.

<u>1987 - 2005</u>

Between 1987 and 2000, groundwater monitoring was conducted quarterly. Following their review of the collected groundwater quality data, the NYSDEC DER and the Division of Solid and Hazardous Materials approved a modified semiannual sampling program in a letter dated January 18, 2000, in accordance with the requirements of 6

NYCRR Section 360 to monitor the effectiveness of the solid waste landfill closure in protecting groundwater quality. This new monitoring program was implemented from April 2000 to November 2005.

2006 - 2017

Following a subsequent review of the post closure groundwater monitoring program and historical groundwater quality data, the NYSDEC DER and the Division of Solid and Hazardous Materials agreed to a modified annual post-closure groundwater monitoring program, which was first implemented in the fall of 2006.

The groundwater monitoring program remained in effect from 2006 through 2017 and consisted of sampling seven (7) of the 11 active on-site groundwater wells at the Landfill (specifically, bedrock wells BW-1, BW-2, BW-3, BW-4, GW-8B, GW-9B and the overburden monitoring well MW-3). The collected representative samples were analyzed for VOCs, Total and Dissolved Iron, Potassium and Zinc, Ammonia, Nitrite, and Total Kjeldahl Nitrogen (TKN) following EPA methodologies. Standard field measurements to assess well stabilization for sampling were also collected. Water level readings were taken on all of the active monitoring wells.

2018 - Current

Based on a review of the Site's historical groundwater data through 2017 showing that concentrations remained relatively consistent, in the PRR for Reporting Year 2017, GrafTech proposed that the groundwater monitoring program be downsized from seven (7) wells to three (3) wells and that the COCs be reduced so that representative samples are tested for only VOCs, Total and Dissolved Iron, and Ammonia; thus, Potassium, Zinc, Nitrite and TKN would be dropped from the parameter list. In the SM PRR Response Letter dated February 8, 2018, NYSDEC accepted GrafTech's proposal for a reduced monitoring program. Beginning in the fall of 2018 and moving forward, only three (3) bedrock wells would require to be sampled (BW-3, GW-8B, and BW-4), and samples would only be analyzed for VOCs.

Summary of the 2021 Groundwater Sampling Campaign, Reports and Results

The annual groundwater sampling campaign was conducted by GHD on May 11, 2021. GHD's 2021 Annual Groundwater Monitoring Letter, dated November 19, 2021, is included as Appendix D. Samples collected from bedrock wells BW-3, BW-4, and GW-8B were submitted to Test America for analysis of VOCs. Analytical test results were compared to the New York State Class GA Groundwater Standards and Guidance Values ("criteria") and to the results of the historical monitoring data for the Landfill for analytes

of interest. The full analytical results for May 2021 are included in Appendix D and in Table 2 of this PRR. Table 2 identifies all analytes that were detected at concentrations above the criteria during the sampling event. Analytes that were detected above criteria during this monitoring event are also discussed below.

Water levels were collected from the three active overburden wells (MW-1, MW-2, and MW-3) and eight active bedrock wells (BW-1 through BW-6, GW-8B, and GW-9B) to document groundwater flow conditions in the overburden and bedrock at the time of the sampling event and to assist in evaluating the analytical results from the bedrock wells sampled. In addition, water levels were collected from inactive bedrock groundwater wells GW-7B and GW-11B on a voluntary basis in order to better understand bedrock groundwater flow direction east of the landfill. Based on the water level data collected, groundwater was flowing in a general east-southeasterly direction in the overburden and, in general, radially off the landfill in southeasterly, southwesterly, and northwesterly directions in the bedrock during the monitoring event. These groundwater flow directions are generally consistent with groundwater flow directions observed during previous monitoring events.

Table 3 presents the current and historical concentration data for BW-3, BW-4, and GW-8B for tetrachloroethylene (PCE), trichloroethylene (TCE), cis-1,2-dichloroethylene (cis-1,2-DCE), and vinyl chloride (VC). Although other VOCs have been detected in these wells, they have only been detected intermittently and at levels below or only slightly above criteria. The four above-listed VOCs have collectively been detected consistently and at elevated concentrations among these three bedrock wells, and as such their concentrations have been monitored through time. Figures 2 through 4 present the historical concentration data for these four VOCs, from March 2000 to the present. Where duplicate samples were collected, the average concentrations detected among the parent and duplicate samples are shown.

The following is a brief discussion of the 2021 sampling results relative to historical concentrations for these four VOCs in the three bedrock wells sampled.

BW-3 (Figure 2)

- **Vinyl Chloride:** VC was detected at a concentration of 9.1 micrograms per liter (µg/L) in May 2021, which was above the criteria of 2 µg/L. Concentrations of VC have either been non-detect or below 10 µg/L since September 2001 and have exhibited minor fluctuations throughout this time period.

- **Cis-1,2-DCE**: Cis-1,2-DCE was detected at a concentration of 2.5 µg/L in May 2021 and has not been detected at concentrations at or above the criteria of 5 µg/L from March 2000 to the present.
- **PCE and TCE:** PCE and TCE were non-detect in May 2021 and have been non-detect since March 2000. As such, they are not shown on Figure 2.

BW-4 (Figure 3)

- **Cis-1,2-DCE:** Cis-1,2-DCE was detected at a concentration of 570 µg/L (480 µg/L in the duplicate) in May 2021, which was above the criteria of 5 µg/L. Concentrations of cis-1,2-DCE have been above criteria since March 2000. Concentrations had been gradually increasing overall since March 2000, with relatively large fluctuations observed from September 2010 to October 2014 and from May 2019 to September 2020. The concentration detected in May 2021 was the lowest concentration detected since March 2005. Future monitoring events will aid in determining if the decreased concentration is a fluctuation in the overall pattern of gradually increasing concentrations or if concentrations will remain decreased.
- **PCE:** PCE was detected at a concentration of 200 µg/L (190 µg/L in the duplicate) in May 2021, which was above the criteria of 5 µg/L. Concentrations of PCE have been above criteria since March 2000 and were relatively stable from March 2000 to May 2013, and from October 2014 through May 2019, though at higher concentrations. Future monitoring events will aid in determining if the concentration detected in May 2021 is part of an apparent long-term stable trend, with some fluctuation.
- **TCE:** TCE was detected at a concentration of 300 µg/L (260 µg/L in the duplicate) in May 2021, which was above the criteria of 5 µg/L. Concentrations of TCE have been above criteria since March 2000 and increased from March 2009 to October 2014. Concentrations had been decreasing from October 2014 through May 2019. Future monitoring events will aid in determining if the concentration detected in May 2021 is part of this overall decreasing trend.
- **Vinyl Chloride:** VC was detected at a concentration of 89 µg/L (72 µg/Lin the duplicate) in May 2021, which was above the criteria of 2 µg/L. Concentrations of VC have been above criteria since March 2000 and gradually increased from March 2000 to October 2014. Concentrations appeared to have stabilized from October 2014 through May 2019. Future monitoring events will aid in determining if the concentration detected in May 2021 is part of an apparent long-term stable trend, with some fluctuation.

GW-8B (Figure 4)

- **Cis-1,2-DCE**: cis-1,2-DCE was detected at a concentration of 20 µg/L in May 2021, which was above the criteria of 5 µg/L. Concentrations of cis-1,2-DCE have been above criteria since March 2000, with the exception of a non-detect in September 2003, but appear to have remained stable since April 2004.
- **Vinyl Chloride:** VC was detected at a concentration of 3.2 µg/L in May 2021, which was above the criteria of 2 µg/L. VC was non-detect from March 2000 to March 2005 and has been detected at concentrations slightly above criteria since September 2006, with the exception of a non-detect in March 2007 and concentrations in May 2015 and May 2017 that were slightly below criteria. Concentrations appear to have remained stable since September 2006.
- **TCE:** TCE was detected at a concentration of 3.6 µg/L in May 2021, which was below the criteria of 5 µg/L. Concentrations have exhibited an overall long-term decrease since March 2003.
- **PCE:** PCE was non-detect in May 2021 and has been non-detect since March 2000. As such, PCE is not shown on Figure 4.

Concentrations of VOCs detected in the bedrock wells BW-3 and GW-8B were generally consistent with the concentrations detected during the September 2020 sampling event. The current and historical data has shown that concentrations of VOCs in well BW-3 remain low, with only VC present at concentrations slightly above criteria. This well was hydraulically downgradient of the landfill during the May 2021 monitoring event, but has been shown to be hydraulically upgradient of the landfill during some previous monitoring events. These shifts in gradient direction may be due to seasonality, as monitoring events have alternated between spring and fall. Concentrations of VOCs in GW-8B, which is hydraulically downgradient of the landfill, also remain low and have either stabilized or are decreasing. As such, **no discernable negative trend in groundwater quality was observed for the Site.** Concentrations of VOCs in BW-4, which is hydraulically upgradient of the landfill based on the current and historical gauging events, have decreased since the September 2020 sampling event. However, these concentrations remain elevated and have typically been 2 to 3 orders of magnitude higher than VOC concentrations in the other bedrock monitoring wells. This strongly suggests an off-Site source.

Discussion of BW-4

The analytical results from the annual groundwater monitoring events have remained relatively stable since 2010, with the exception of the bedrock aquifer upgradient well BW-4. During the October 2014 sampling event, notable increases in concentration were observed in well BW-4 for the four (4) VOCs of interest - PCE, TCE, vinyl chloride, and

cis-1,2-DCE. During the subsequent sampling events, these concentrations all decreased from the 2014 levels, and, by the May 2017 sampling event, all had generally returned to pre-2014 levels or similar except for PCE. Concentrations of these four VOCs were significantly decreased during the May 2021 sampling event. However, the concentrations of these VOCs still remain well above criteria in this upgradient well, consistent with prior years.

Notwithstanding the May 2021 results, concentrations of PCE, TCE, vinyl chloride, and cis-1,2-DCE have shown long-term, gradually increasing trends in BW-4 since March 2000. The reason for these long-term gradual increases is not known. Relatively large increases in concentration were observed from May 2019 to September 2020, and large decreases in concentration were observed from September 2020 to May 2021. Future monitoring events will aid in determining if the decreased concentrations detected in May 2021 are representative of improved groundwater quality at BW-4 or if they are fluctuations in the overall pattern of gradually increasing concentrations observed since March 2000. This well is hydraulically upgradient of the landfill, and does not represent groundwater quality at the Site.

A voluntary supplemental investigation of the entire groundwater well network at the Site conducted by Conestoga-Rovers & Associates (CRA) in January 2015 did not identify any structural abnormalities of the wells in the network that could account for the increases in VOC concentrations in BW-4. A copy of CRA's well inspection report was submitted as part of the 2014 PRR. BW-4 was redeveloped in fall 2016, the results of which were submitted as part of the 2016 PRR. No further investigations or developments of the monitoring wells have been conducted at the Site since 2016, other than the redevelopment of bedrock wells BW-1 through BW-6 in April 2019 due to buildup of sediment/debris. It is noteworthy that the VOC exceedances of the applicable state criteria at bedrock monitoring well BW-4, which is upgradient of the landfilled area, continue to be at much higher concentrations (by 2 to 3 orders of magnitude) than the VOC levels at the other bedrock aquifer monitoring wells (refer to Table 3).

Furthermore, the significant increases in VOC concentrations detected at the upgradient bedrock aquifer well BW-4 during the 2014 sampling event were not observed in the other bedrock monitoring wells. Although not currently in the sampling plan, historically these VOCs have not been detected in the downgradient bedrock wells BW-2 and GW-9B. This indicates that contaminant migration has not occurred.

It is also significant that the more notable exceedances of the applicable VOC criteria are in the bedrock groundwater monitoring wells located along the northern border of the Site

(BW-4 and GW-8B), which are adjacent to the Niagara Mohawk right-of-way (ROW). BW-4 is hydraulically upgradient of the landfill, and GW-8B is hydraulically downgradient of the landfill. Although GW-8B is hydraulically downgradient of the landfill, the proximity of upgradient well BW-4, with VOC impacts 2 to 3 orders of magnitude greater than in the other bedrock wells, strongly suggests that the VOC concentrations in both of these wells are the result of an off-site source. Nevertheless, as concentrations of VOCs in GW-8B are low and have either stabilized or are decreasing, concentrations in this well do not represent a negative trend in groundwater quality for the Site.

3.2. Soil Vapor Monitoring

No soil vapor monitoring was required or performed during the report year.

3.3. Site Inspections and Records

NYSDEC did not conduct a state inspection of the Landfill in 2021.

Based on a deficiency in the groundwater well inspection program that was identified by NYSDEC during its last Site inspection in May 2013, GrafTech increased the frequency of its inspections of the monitoring wells on a temporary basis between August 2013 through December 2013, by including them in the scheduled weekly inspections. GrafTech also proposed to NYSDEC a formal modification to the Site inspection program to consist of:

- weekly general and security inspections at the Site; and
- quarterly monitoring well inspections (increased from annually).

NYSDEC subsequently approved this proposal. GrafTech implemented the improved inspection program starting in January 2014.

GrafTech incorporated the modified Site inspection protocol and inspection forms into the proposed SMP, which was submitted to the state for approval in December 2013, and subsequently approved by NYSDEC in November 2016. There have been no other deficiencies identified in the approved IC/EC at this Site nor any other recommended improvements to the SMP during the prior or current certification periods.

Routine inspections continued to be performed at the Site in 2021 by the current contracted GrafTech Designated Representative, NMCC, in accordance with the modified protocol specified in the SMP. Further details are provided below.

Routine inspections of the facilities and established controls at the Landfill Site were conducted and the results documented by NMCC (refer to the standard forms for

documenting the weekly and quarterly inspections in Appendix A). NMCC was responsible for scheduling and managing the routine maintenance, repairs or any other actions needed to correct any deficiencies identified during these periodic inspections, under the supervision of the GrafTech Representative, currently Julianne Snyder.

Details are provided below of the modified weekly and the quarterly inspection programs, first initiated in 2014.

3.3.1. General Landfill and Site Security Inspections and Records - Weekly

The following areas were inspected once per week and the inspection results documented on the standard inspection form.

- Fence (general condition, evidence of security breaches).
- Gate (general condition, lock, evidence of security breaches).
- Cap (general condition, signs of erosion, adequate vegetation).
- Surrounding area (general condition).

Note: if any evidence of a Site security breach was found during the above inspections, the groundwater well installations were also inspected for potential tampering or damage, and those inspections were documented on the standard quarterly monitoring well inspection form.

Any noted deficiency was identified on the inspection record and the corrective action was documented on the same or a subsequent inspection record when completed. Any fence areas that were found to be damaged were also duly noted on the inspection map.

3.3.2. Groundwater Monitoring Well Inspections and Records - Quarterly

The GrafTech-Designated Representative, currently NMCC, inspected all the active on-site GrafTech-owned groundwater monitoring well installations quarterly to ensure they were kept in good condition and were properly secured with a lock. The inspector recorded his/her name, the date and time of the inspection, the inspection results and any recommended corrective actions on the standard report form.

- Closed locks on the well casing caps.
- Condition of outer well casing.
- Condition of concrete seals.

Documentation of any needed corrective actions were recorded on the same or a subsequent inspection record when completed.

3.4. Routine Maintenance and Repairs

The following maintenance and repair activities were conducted per the SMP:

- Repairs were made as needed by outside contractor(s) to timely correct any deficiencies discovered during the routine weekly Site security and quarterly monitoring well inspections. These included repairs to the perimeter security fencing and the concrete pads at the well installations, as needed.
- Mowing of the vegetative cover on the Landfill cap and the perimeter lawn of the Landfill, and other general care of the Site were scheduled, as needed.
- General clean-up of any debris found along the fence line and inside the Site were performed, as needed, to keep the Landfill and surrounding area clear of any objectionable or unsightly materials.

3.5. Record Retention

All inspection records are being retained for a minimum period of three (3) years. Completed inspection forms are located in Appendices F (weekly inspections) and G (quarterly inspections). Completed inspection forms will be made available for review during scheduled NYSDEC Site inspections, or copies will be made available to the state upon reasonable written request.

4. Excavation Plan Status

No excavations were performed during 2021.

5. Property Transfer Status

No property transfer activities were completed in 2021.

6. Conclusions and Recommendations

The GrafTech Landfill is a Class 4 Inactive Hazardous Waste Site, with no required Remedial Program or remedial objectives. Site inspections, monitoring and maintenance activities, and reporting requirements were implemented in conformance with the SMP for the Site during the certification period.

The analytical results from the 2021 groundwater monitoring campaign were consistent with the historical data. The groundwater monitoring program for the past 30+ years since closure of the Landfill has identified no negative trends in the groundwater quality associated with the landfill. VOC concentrations in well BW-4, which is upgradient of the landfill, continue to be 2 to 3 orders of magnitude higher than VOC concentrations detected in the other bedrock wells at the Site. This strongly suggests an off-site source.

The engineering controls and associated institutional controls are still in place, are performing properly, remain effective, and continue to be protective of public health and the environment. Based on GrafTech's review, there is no indication that changes to the IC/EC are needed. A copy of the completed and signed IC/EC Certification form is attached in Appendix E.

Due to the following facts:

1) this Landfill is a Class 4 Inactive Hazardous Waste Site;

2) there is no required Remedial Program or remedial objectives; and

3) the monitoring program for the past 34 years since closure of the Site has identified no negative trends in the groundwater quality at downgradient wells;

GrafTech recommends that compliance be maintained with the approved SMP during 2022. In a letter from the NYSDEC dated April 16, 2021, the NYSDEC requested that additional bedrock wells BW-1, BW-2, and BW-6 be sampled and analyzed for VOCs based on increases in VOC concentrations observed in bedrock well BW-4 in 2020. As indicated in Section 3.1, relatively large increases in VOC concentrations were observed in BW-4 from May 2019 to September 2020, and large decreases in VOC concentrations were observed in BW-4 from September 2020 to May 2021. Future monitoring events will aid in determining if the decreased concentrations detected in May 2021 are representative of improved groundwater quality at BW-4 or if they are fluctuations in the overall pattern of gradually increasing concentrations observed since March 2000. As there are no potential receptors for the VOC-impacted groundwater present in BW-4, GrafTech recommends that two additional regular sampling events be performed (sampling BW-3, BW-4, and GW-8B only) to better evaluate the significance of the recent fluctuations in VOC concentrations in this well. After review of the validated spring 2023 sampling data, a determination will be made on the need and extent

of sampling additional wells, and whether modifications to the established Site management programs are recommended. GrafTech will communicate the results of its assessment to NYSDEC with its recommendations, if any, for proposed changes to the Site Management Plan for this Landfill.

Table 1

Site Monitoring Well Details

Table 1
Site Monitoring Well Details

Well	Status	Well Type	Well Diameter (inches)	Installed Depth (ft. bgs)	Ground Elevation (ft. AMSL)	Top of Riser Elevation (ft. AMSL)	Top of Casing Elevation (ft. AMSL)	Monitored Interval (ft. bgs)	Full Name of Well
BW-1	Active	Bedrock/Open Hole	4/3	34.5	609.05	608.55	611.66*	19.5 to 34.5	BW1-86
BW-2	Active	Bedrock/Open Hole	4/3	35.0	605.37	606.58	608.40*	19.0 to 35.0	BW2-86
BW-3	Active	Bedrock/Open Hole	4/3	22.4	602.00	603.46	605.02*	7.4 to 22.4	BW3-86
BW-4	Active	Bedrock/Open Hole	4/3	25.0	604.33	605.47	607.13*	11.4 to 25.0	BW4-86
BW-5	Active	Bedrock/Open Hole	4/3	24.9	599.60	600.36	603.27*	10.0 to 24.9	BW5-86
BW-6	Active	Bedrock/Open Hole	4/3	32.9	607.59	607.08	611.11*	17.7 to 32.9	BW6-86
GW-7B	Inactive	Bedrock/Open Hole	3	29.7	599.80	602.49	603.81*	19.4 to 29.7	GW7B-93
GW-8A	Inactive	Overburden	3	17.5	601.50	NA	604.04*	12.4 to 17.4	GW8A-93
GW-8B	Active	Bedrock/Open Hole	3	27.5	601.38	603.30*	603.97	20.7 to 27.5	GW8B-93
GW-9A	Inactive	Overburden	3	20.3	601.50	NA	603.29*	15.3 to 20.3	GW9A-93
GW-9B	Active	Bedrock/Open Hole	3	29.5	600.55	602.74*	602.99	24.8 to 29.5	GW9B-93
GW-11B	Inactive	Bedrock/Open Hole	3	25.4	599.07	601.40*	601.66	16.0 to 25.4	GW11B-93
MW-1	Active	Overburden	4	18.3	608.55	608.97	611.13*	16.8 to 18.3	MW1-78
MW-2	Active	Overburden	4	20.1	607.04	611.62*	NP	17.5 to 18.0	MW2-78
MW-3	Active	Overburden	2	13.4	599.27	601.80*	602.18	8.0 to 13.0	MW3-79
WW-1	Inactive	Overburden	2	NA	NA	NA	NA	NA	WW1-86
OW-1	Inactive	Overburden	2	NA	NA	NA	NA	NA	OW1-88
OW-2	Inactive	Overburden	2	NA	NA	NA	NA	NA	OW2-88

* = Reference elevation for determining groundwater elevation
NA = Not available
NP = Not present
4/3 = Casing diameter/corehole diameter
ft. bgs = Feet below ground surface
ft. AMSL = Feet above mean sea level

Table 2

Analytical Results Summary – May 2021

Table 2

Analytical Results Summary
May 2021

Location ID:			BW-3	BW-4	BW-4	GW-8B
Sample Name:			WG-11194450-051121-DT-002	WG-11194450-051121-DT-003	WG-11194450-051121-DT-004	WG-11194450-051121-DT-001
Sample Date:			05/11/2021	05/11/2021	05/11/2021 Duplicate	05/11/2021
Parameters	**Unit**	**NYSDEC Class GA Criteria/TOGS**				
Volatile Organic Compounds						
1,1,1-Trichloroethane	µg/L	5	1.0 U	20 U	20 U	1.0 U
1,1,2,2-Tetrachloroethane	µg/L	5	1.0 U	20 U	20 U	1.0 U
1,1,2-Trichloroethane	µg/L	1	1.0 U	20 U	20 U	1.0 U
1,1-Dichloroethane	µg/L	5	1.0 U	20 U	20 U	1.0 U
1,1-Dichloroethene	µg/L	5	1.0 U	20 U	20 U	1.0 U
1,2-Dichloroethane	µg/L	0.6	1.0 U	20 U	20 U	1.0 U
1,2-Dichloroethene (total)	µg/L	5	2.5	570	480	20
1,2-Dichloropropane	µg/L	1	1.0 U	20 U	20 U	1.0 U
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	50	10 U	200 U	200 U	10 U
2-Hexanone	µg/L	50	5.0 U	100 U	100 U	5.0 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	--	5.0 U	100 U	100 U	5.0 U
Acetone	µg/L	50	10 U	200 U	200 U	10 U
Benzene	µg/L	1	1.0 U	20 U	20 U	1.0 U
Bromodichloromethane	µg/L	50	1.0 U	20 U	20 U	1.0 U
Bromoform	µg/L	5	1.0 U	20 U	20 U	1.0 U
Bromomethane (Methyl bromide)	µg/L	5	1.0 U	20 U	20 U	1.0 U
Carbon disulfide	µg/L	60	1.0 U	20 U	20 U	1.0 U
Carbon tetrachloride	µg/L	5	1.0 U	20 U	20 U	1.0 U
Chlorobenzene	µg/L	5	1.0 U	20 U	20 U	1.0 U
Chloroethane	µg/L	5	1.0 U	20 U	20 U	1.0 U
Chloroform (Trichloromethane)	µg/L	7	1.0 U	20 U	20 U	1.0 U
Chloromethane (Methyl chloride)	µg/L	5	1.0 U	20 U	20 U	1.0 U
cis-1,2-Dichloroethene	µg/L	5	2.5	570	480	20
cis-1,3-Dichloropropene	µg/L	0.4	1.0 U	20 U	20 U	1.0 U
Dibromochloromethane	µg/L	50	1.0 U	20 U	20 U	1.0 U
Ethylbenzene	µg/L	5	1.0 U	20 U	20 U	1.0 U
Methylene chloride	µg/L	5	1.0 U	20 U	20 U	1.0 U
Styrene	µg/L	5	1.0 U	20 U	20 U	1.0 U
Tetrachloroethene	µg/L	5	1.0 U	200	190	1.0 U
Toluene	µg/L	5	1.0 U	20 U	20 U	1.0 U
trans-1,2-Dichloroethene	µg/L	5	1.0 U	20 U	20 U	1.0 U
trans-1,3-Dichloropropene	µg/L	0.4	1.0 U	20 U	20 U	1.0 U
Trichloroethene	µg/L	5	1.0 U	300	260	3.6
Vinyl chloride	µg/L	2	9.1	89	72	3.2
Xylenes (total)	µg/L	5	2.0 U	40 U	40 U	2.0 U

Notes:

U - Not detected at the associated reporting limit

Class GA Criteria/TOGS - Groundwater Effluent Limitations/Technical and Operational Guidance Series

9.1 Indicates exceedance of NYSDEC Class GA Criteria/TOGS

Table 3

Summary of Bedrock Well Analytical Results: PCE, TCE, cis-1,2-DCE, and Vinyl Chloride

Table 3

Summary of Bedrock Well Analytical Results: PCE, TCE, cis-1,2-DCE, and Vinyl Chloride
March 2000 - May 2021

Well Number	Parameter	Groundwater Criteria (ppb)	March 2000 (ppb)	Sept. 2001 (ppb)	March 2002 (ppb)	Sept. 2002 (ppb)	March 2003 (ppb)	Sept. 2003 (ppb)	March/April 2004 (ppb)	Sept. 2004 (ppb)	March 2005 (ppb)	Sept. 2006 (ppb)	March 2007 (ppb)
BW-3	Cis-1,2-DCE	5	10U	5U	5U	5U	5U	5U	5U	5U	5U	1.8	5U
	PCE	5	10U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U
	TCE	5	10U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U
	Vinyl Chloride	2	**15**	5U	5U	5U	5U	5U	5U	**6.1**	5U	**5.7**	5.0U
GW-8B	Cis-1,2-DCE	5	**14**	**23 (22)**	**26**	**27**	**22**	5U	**21**	**20**	**22**	**23**	**20**
	PCE	5	10U	5U (5U)	5U	5U	5U	5U	5U	5U	5U	5U	5U
	TCE	5	10U	**7.5 (7.2)**	**10**	**10**	**13**	**12**	**8.3**	**13**	**6.5**	**6.9**	**9.8**
	Vinyl Chloride	2	10U	5U (5U)	5U	5U	5U	5U	5U	5U	5U	**4.6J**	5.0U
BW-4	Cis-1,2-DCE	5	**180**	**270**	**420**	**300**	**230 (240)**	**500**	**660**	**370 (390)**	**540 (530)**	**620 (620)**	**710 (640)**
	PCE	5	**135**	**240**	**64**	**230**	**29 (30)**	**100**	**110**	**55 (56)**	**64 (65)**	**84 (86)**	**120 (110)**
	TCE	5	**178**	**410**	**230**	**420**	**170 (170)**	**330**	**230**	**290 (290)**	**180 (180)**	**290 (290)**	**310 (280)**
	Vinyl Chloride	2	**115**	**74**	**92**	**59**	**41 (41)**	**100**	**180**	**75 (79)**	**180 (180)**	**140 (140)**	**170 (150)**

Shaded cells indicate the concentrations exceeds the New York State Class GA Groundwater Criteria

Parentheses indicate the results of the duplicate sample

* - Concentration represents total 1,2-DCE

** - Concentration represents total DCE

J - Concentration is an estimated value

U - Not present at or above the associated value

Table 3

Summary of Bedrock Well Analytical Results: PCE, TCE, cis-1,2-DCE, and Vinyl Chloride
March 2000 - May 2021

Well Number	Parameter	Groundwater Criteria (ppb)	Sept. 2008 (ppb)	March 2009 (ppb)	Sept. 2010 (ppb)	May 2011 (ppb)	Sept. 2012 (ppb)	May 2013 (ppb)	Oct. 2014 (ppb)	May 2015 (ppb)	Sept. 2016 (ppb)	May 2017 (ppb)	Sept. 2018 (ppb)	May 2019 (ppb)	September 2020 (ppb)
BW-3	Cis-1,2-DCE	5	2.2	10U*	2.2J*	0.95J**	2	1.7	0.45	2.8	0.85	0.99	1.0U	1.2	1.0U
	PCE	5	5U	5U	5U	0.42U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
	TCE	5	5U	5U	5U	0.30U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
	Vinyl Chloride	2	**8.2**	5.0U	**6.4**	0.3U	**5.7**	**6.0**	**4.1**	**3.2**	**3.1**	1.0U	**2.5**	**5.1**	**4.9**
GW-8B	Cis-1,2-DCE	5	**23**	**20***	**20***	**19****	**23**	**20**	**22**	**17**	**24**	**14 (14)**	**21.0**	**18**	**22**
	PCE	5	5U	5U	5U	0.42U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
	TCE	5	**5.7**	**7.4**	**8.8**	**8.2**	**7.6**	**7.2**	**12**	**12**	**9.7**	**9.2 (9.2)**	4.7	**8.0**	3.6
	Vinyl Chloride	2	**4.7J**	**3.5J**	**3.5J**	**2.9J**	**3.5**	**3.8**	**2.7**	1.6	**3.1**	1.7	**3.5**	**2.1**	**6.0**
BW-4	Cis-1,2-DCE	5	**580 (540)**	**720***	**740***	**1000****	**1700**	**1300**	**2200 (1700)**	**1300**	**930J**	**950**	**1000 (940)**	**1000 (1000)**	**2300 (1900)**
	PCE	5	**86 (79)**	**140J**	**97**	**92**	**120**	**92**	**390 (330)**	**300**	**240**	**250**	**390 (410)**	**390 (400)**	**1600 (1200)**
	TCE	5	**320 (300)**	**220J**	**300**	**390**	**640**	**510**	**1300 (980)**	**790**	**660J**	**600**	**650 (640)**	**510 (540)**	**1200 (930)**
	Vinyl Chloride	2	**100 (100)**	**160J**	**170**	**190**	**290**	**240**	**350 (270)**	**270**	**180**	**240**	**150 (180)**	**230 (270)**	**480 (410)**

Shaded cells indicate the concentrations exceeds the New York State Class GA Groundwater Criteria

Parentheses indicate the results of the duplicate sample

* - Concentration represents total 1,2-DCE

** - Concentration represents total DCE

J - Concentration is an estimated value

U - Not present at or above the associated value

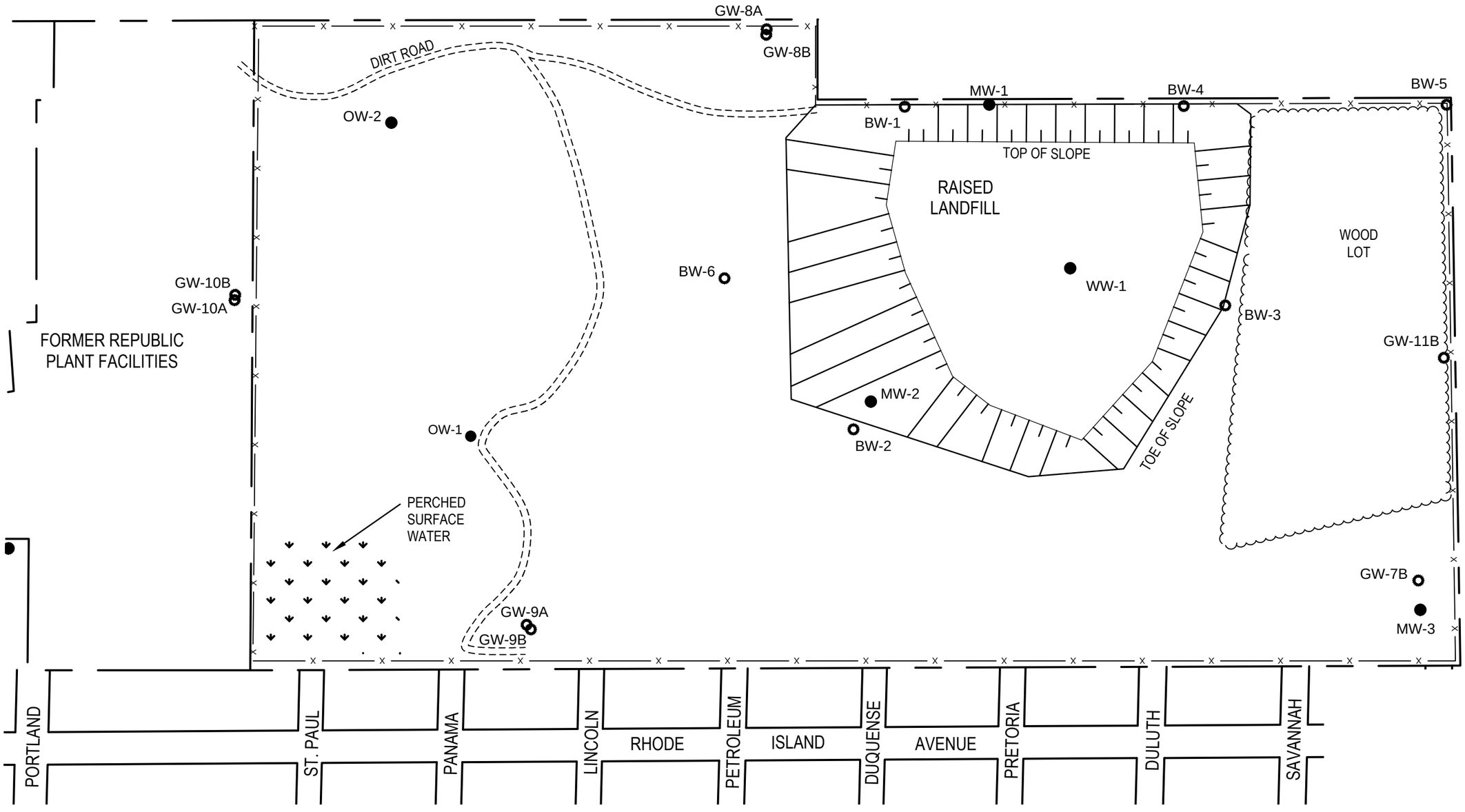
Table 3

Summary of Bedrock Well Analytical Results: PCE, TCE, cis-1,2-DCE, and Vinyl Chloride
March 2000 - May 2021

Well Number	Parameter	Groundwater Criteria (ppb)	May 2021 (ppb)
BW-3	Cis-1,2-DCE	5	2.5
	PCE	5	1.0U
	TCE	5	1.0U
	Vinyl Chloride	2	**9.1**
GW-8B	Cis-1,2-DCE	5	**20**
	PCE	5	1.0U
	TCE	5	3.6
	Vinyl Chloride	2	**3.2**
BW-4	Cis-1,2-DCE	5	**570 (480)**
	PCE	5	**200 (190)**
	TCE	5	**300 (260)**
	Vinyl Chloride	2	**89 (72)**

Shaded cells indicate the concentrations exceeds the New York State Class GA Groundwater Criteria
Parentheses indicate the results of the duplicate sample
* - Concentration represents total 1,2-DCE
** - Concentration represents total DCE
J - Concentration is an estimated value
U - Not present at or above the associated value

Figures



LEGEND

- MW-3 — OVERBURDEN MONITORING WELL LOCATION
- BW-4 — BEDROCK MONITORING WELL LOCATION
- PROPERTY LINE
- x FENCE

N

0 200'

GHD

FORMER REPUBLIC LANDFILL
NIAGARA FALLS, NEW YORK

SITE PLAN
(JANUARY 11, 2022)

Project No. **11194450**
Date **January 22**

FIGURE 1.0

Data Source

Filename: N:\US\Niagara Falls\Projects\564\11194450\Digital_Design\ACAD 2018\Figures\January 2022 Site Plan\11194450-FIG 1.0-Jan 2021 Site Plan.dwg
Plot Date: 11 January 2022 9:40 AM

Figure 2
Historical Data Graph
Well BW-3

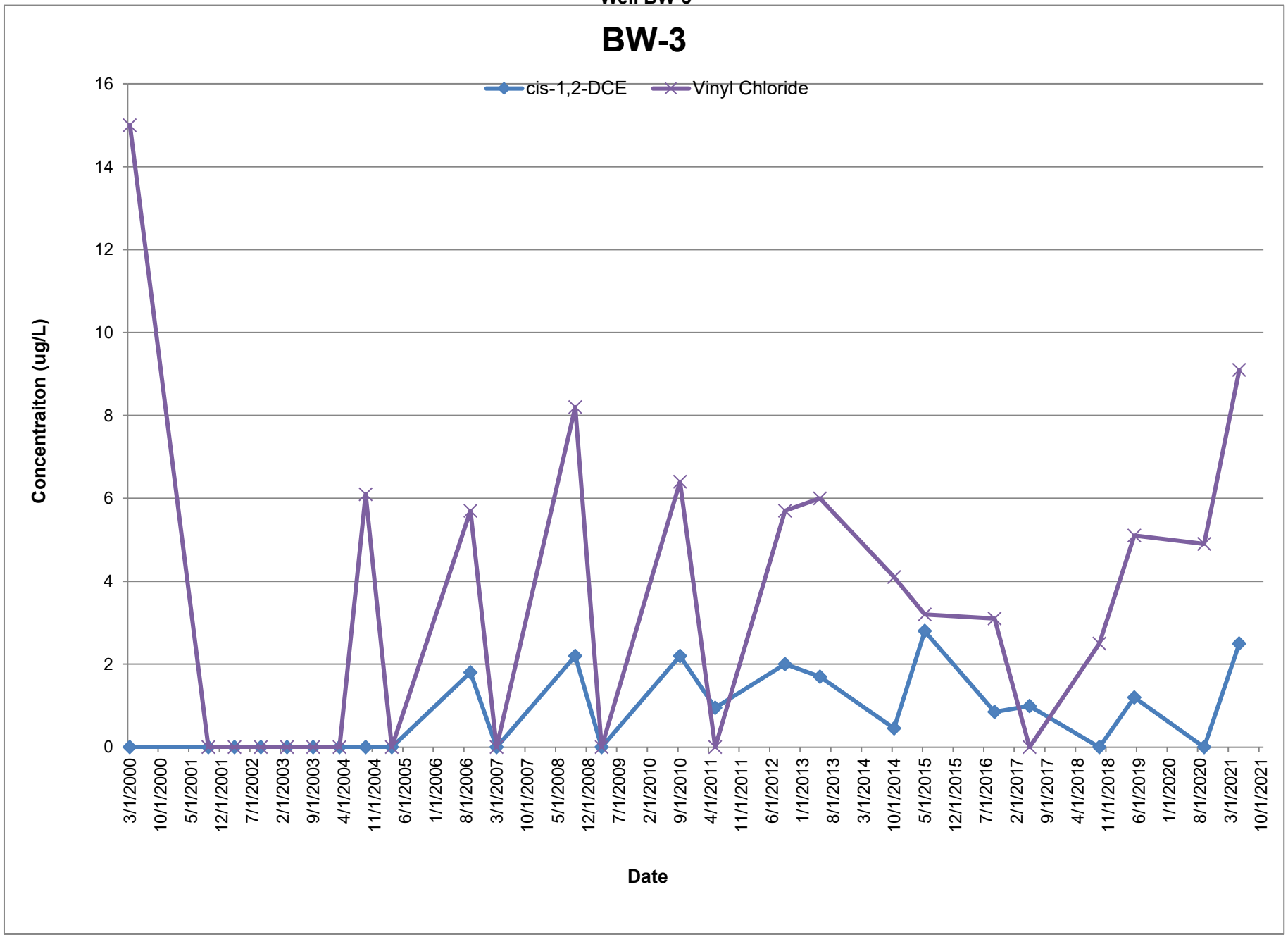


Figure 3
Historical Data Graph
Well BW-4

Former Republic Landfill

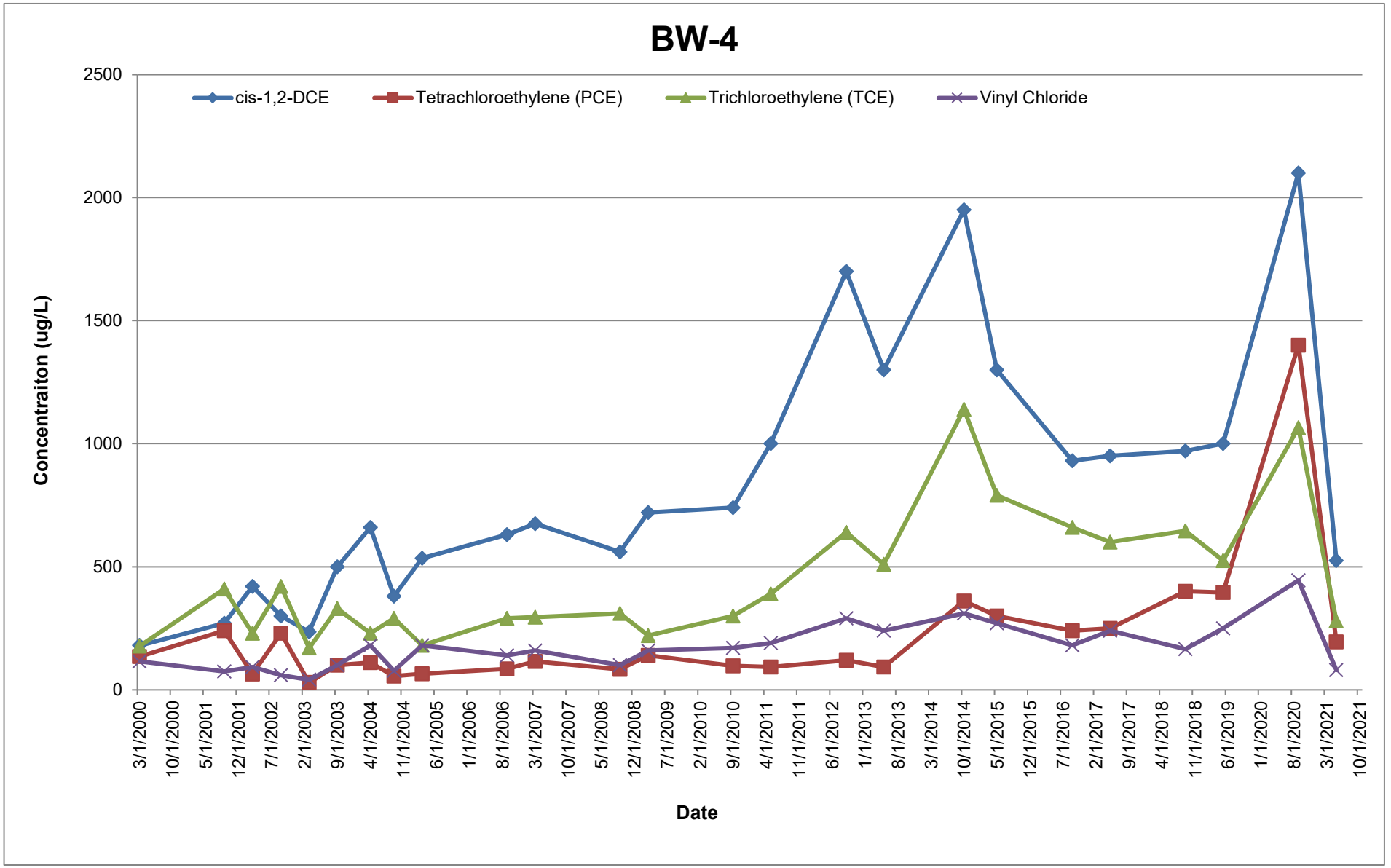
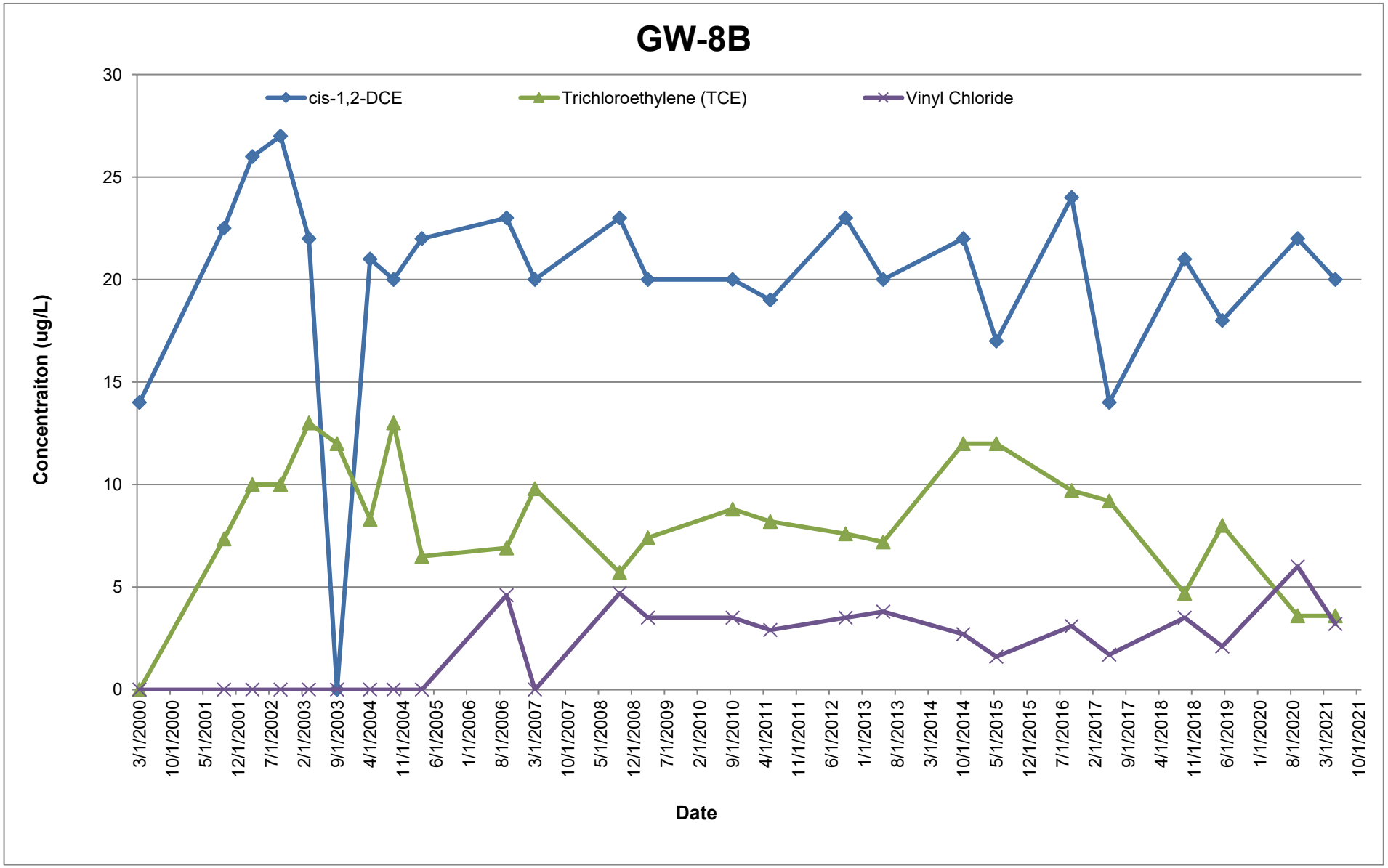


Figure 4
Historical Data Graph
Well GW-8B

Former Republic Landfill



Appendix A

Weekly General Landfill and Site Security Inspection Report Form

Quarterly Groundwater Well Inspection Report Form

GRAFTech International

WEEKLY GENERAL LANDFILL AND SITE SECURITY INSPECTION REPORT

DATE	TIME	INSPECTOR NAME

FENCE AREA	OK	DAMAGED	REPAIR DATE	REMARKS
A				
B				
C				
D				
E				
F				
G				
H				
I				
J				

GATE	OK	DAMAGED	REPAIR DATE	REMARKS
1				
2				
3				

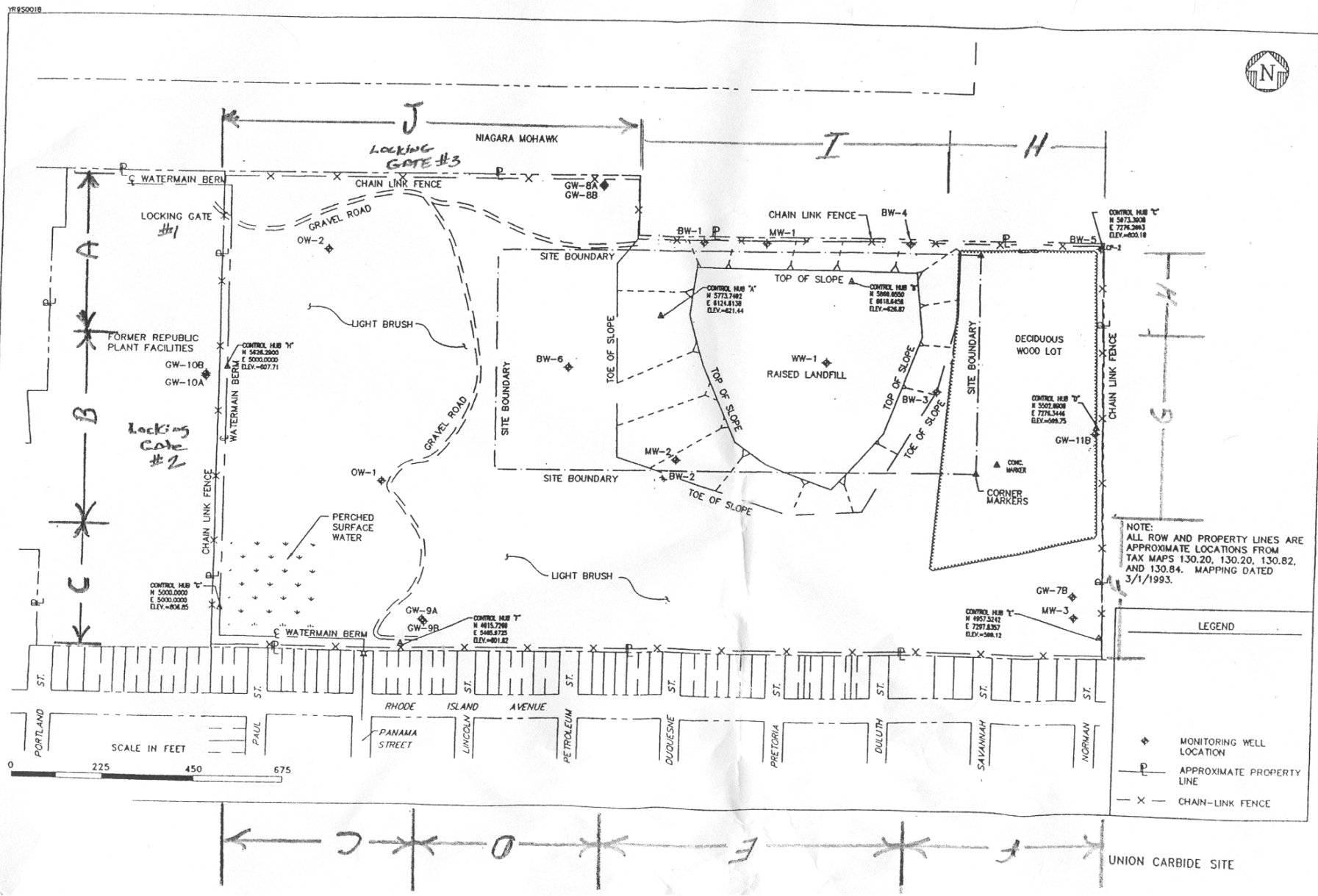
SECURITY-RELATED ENGINEERED CONTROLS COMMENTS: (Check for condition, damage, signs of security breach)

CAP COMMENTS: (Check for erosion and adequate vegetation)

SURROUNDING AREA COMMENTS: (Check for condition, damage, signs of security breach)

RECORD THE DATE(S) THAT THE ENTIRE CAP WAS MOWED:_____

IN THE EVENT THAT ANY SIGN OF A SITE SECURITY BREACH IS IDENTIFIED DURING THE ABOVE SITE INSPECTIONS, COMPLETE A FULL GROUNDWATER MONITORING WELL INSPECTION AND DOCUMENT RESULTS USING THE QUARTERLY GROUNDWATER WELL INSPECTION REPORT FORM (APPENDIX B) AND ATTACH TO THIS FORM.


YR9S0018
J
I
H
G
F
E
D
C
B
A
NIAGARA MOHAWK
Locking Gate #3
℄ WATERMAIN BERM
CHAIN LINK FENCE
GW-8A
GW-8B
LOCKING GATE #1
GRAVEL ROAD
OW-2
CHAIN LINK FENCE
BW-4
BW-1
MW-1
BW-5
SITE BOUNDARY
TOP OF SLOPE
CONTROL HUB "A"
N 5773.7492
E 8124.8138
ELEV.=621.44
CONTROL HUB "B"
N 5868.8000
E 8618.8458
ELEV.=626.87
CONTROL HUB "C"
N 5873.3808
E 7274.2983
ELEV.=620.18
LIGHT BRUSH
FORMER REPUBLIC PLANT FACILITIES
GW-10B
GW-10A
CONTROL HUB "H"
N 5436.2900
E 5000.0000
ELEV.=607.71
WATERMAIN BERM
BW-6
TOE OF SLOPE
SITE BOUNDARY
WW-1
RAISED LANDFILL
TOP OF SLOPE
TOP OF SLOPE
BW-3
TOE OF SLOPE
SITE BOUNDARY
DECIDUOUS WOOD LOT
CONTROL HUB "D"
N 5502.8808
E 7274.3446
ELEV.=569.75
GW-11B
CHAIN LINK FENCE
Locking Gate #2
GRAVEL ROAD
MW-2
BW-2
TOE OF SLOPE
CONC. MARKER
CORNER MARKERS
OW-1
SITE BOUNDARY
PERCHED SURFACE WATER
CHAIN LINK FENCE
CONTROL HUB "G"
N 5000.0000
E 5000.0000
ELEV.=606.65
LIGHT BRUSH
GW-9A
GW-9B
CONTROL HUB "F"
N 4615.7288
E 5465.9725
ELEV.=601.82
℄ WATERMAIN BERM
GW-7B
MW-3
CONTROL HUB "E"
N 4957.3242
E 7297.8357
ELEV.=589.12
NOTE:
ALL ROW AND PROPERTY LINES ARE APPROXIMATE LOCATIONS FROM TAX MAPS 130.20, 130.20, 130.82, AND 130.84. MAPPING DATED 3/1/1993.
LEGEND
MONITORING WELL LOCATION
APPROXIMATE PROPERTY LINE
CHAIN-LINK FENCE
ST.
PORTLAND
PAUL
RHODE ISLAND AVENUE
PANAMA STREET
LINCOLN
PETROLEUM
DUQUESNE
PRETORIA
DULUTH
SAVANNAH
NORMAN
SCALE IN FEET
0
225
450
675
UNION CARBIDE SITE

GRAFTech International

QUARTERLY GROUNDWATER WELL INSPECTION REPORT

GRAFTECH WELLS

WELL I.D. NUMBER	WELL I.D. TAG INTACT (YES/NO)	LOCK CONDITION	OUTER CASING CONDITION	CONCRETE SEAL CONDITION	COMMENTS
MW1-78					
MW2-78					
MW3-79					
BW1-86					
BW2-86					
BW3-86					
BW4-86					
BW5-86					
BW6-86					
WW1-86					
OW1-88					
OW2-88					

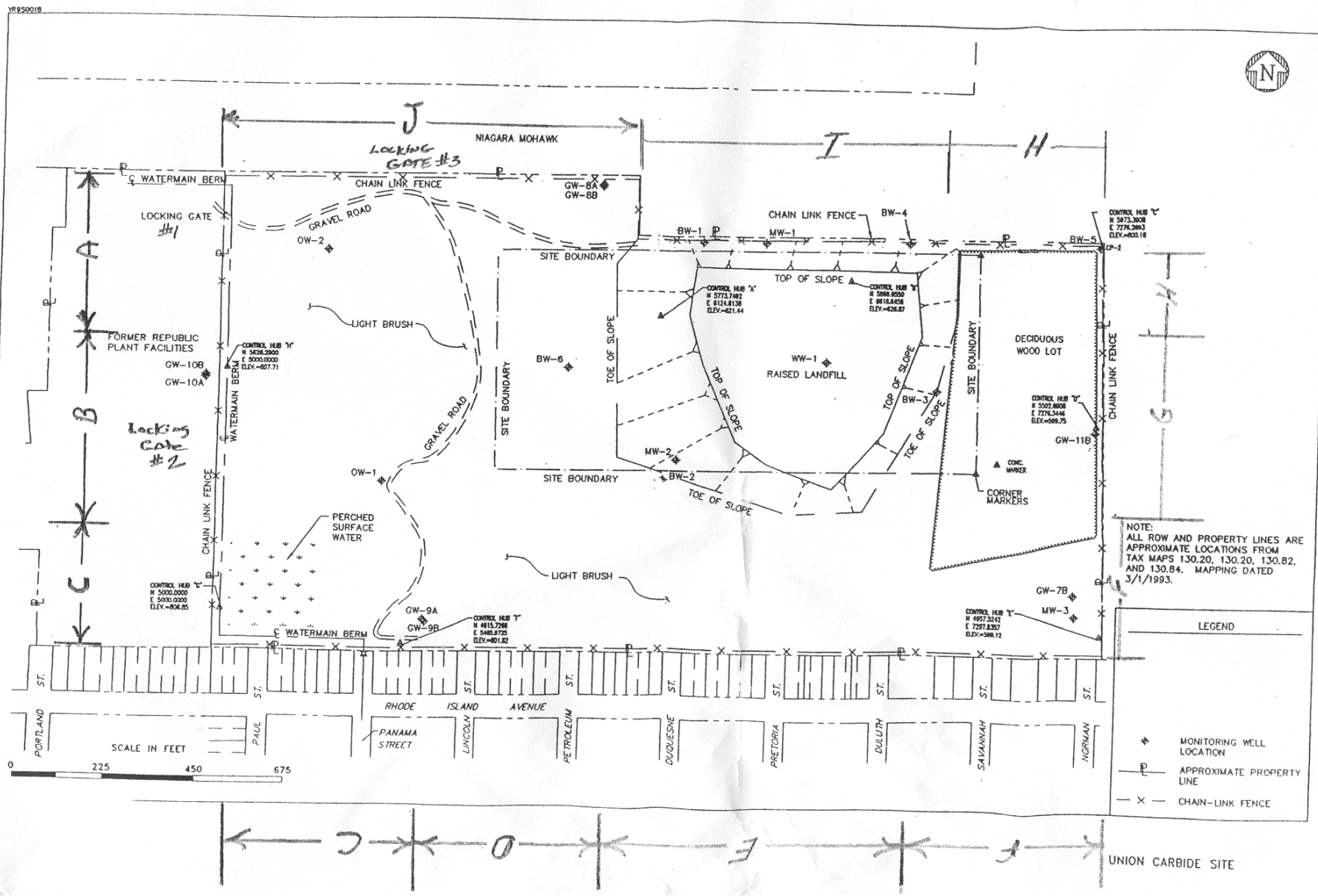
ON-SITE WELLS INSTALLED BY NYSDEC

(Installed Sept./Oct. 93)

WELL I.D. NUMBER	WELL I.D. TAG INTACT (YES/NO)	LOCK CONDITION	OUTER CASING CONDITION	CONCRETE SEAL CONDITION	COMMENTS
GW7B-93					
GW8A-93					
GW8B-93					
GW9A-93					
GW9B-93					
GW11B-93					

Note:

MW wells are installed in the overburden.
BW wells are bedrock wells.
GWA wells are installed in the overburden.
GWB wells are bedrock wells.
OW and WW wells are overburden wells installed with the screen above the till layer.


YR9S0018
J
I
H
G
F
E
D
C
B
A
NIAGARA MOHAWK
Locking Gate #3
℄ WATERMAIN BERM
CHAIN LINK FENCE
GW-8A
GW-8B
LOCKING GATE #1
GRAVEL ROAD
OW-2
CHAIN LINK FENCE
BW-4
BW-1
MW-1
BW-5
SITE BOUNDARY
TOP OF SLOPE
CONTROL HUB "A"
N 5773.7492
E 8124.8138
ELEV.=621.44
CONTROL HUB "B"
N 5868.8000
E 8618.8458
ELEV.=626.87
CONTROL HUB "C"
N 5873.3808
E 7274.2983
ELEV.=620.18
LIGHT BRUSH
FORMER REPUBLIC PLANT FACILITIES
GW-10B
GW-10A
CONTROL HUB "H"
N 5436.2900
E 5000.0000
ELEV.=607.71
WATERMAIN BERM
BW-6
TOE OF SLOPE
SITE BOUNDARY
WW-1
RAISED LANDFILL
TOP OF SLOPE
TOP OF SLOPE
BW-3
TOE OF SLOPE
SITE BOUNDARY
DECIDUOUS WOOD LOT
CONTROL HUB "D"
N 5502.8808
E 7274.3446
ELEV.=569.75
GW-11B
CHAIN LINK FENCE
Locking Gate #2
GRAVEL ROAD
MW-2
BW-2
TOE OF SLOPE
CONC. MARKER
CORNER MARKERS
OW-1
SITE BOUNDARY
PERCHED SURFACE WATER
CHAIN LINK FENCE
CONTROL HUB "G"
N 5000.0000
E 5000.0000
ELEV.=606.65
LIGHT BRUSH
GW-9A
GW-9B
CONTROL HUB "F"
N 4615.7288
E 5465.9725
ELEV.=601.82
℄ WATERMAIN BERM
GW-7B
MW-3
CONTROL HUB "E"
N 4957.3242
E 7297.8357
ELEV.=589.12
NOTE:
ALL ROW AND PROPERTY LINES ARE APPROXIMATE LOCATIONS FROM TAX MAPS 130.20, 130.20, 130.82, AND 130.84. MAPPING DATED 3/1/1993.
LEGEND
MONITORING WELL LOCATION
APPROXIMATE PROPERTY LINE
CHAIN-LINK FENCE
ST.
PORTLAND
PAUL
RHODE ISLAND AVENUE
PANAMA STREET
LINCOLN
PETROLEUM
DUQUESNE
PRETORIA
DULUTH
SAVANNAH
NORMAN
SCALE IN FEET
0
225
450
675
UNION CARBIDE SITE

Appendix B

Letter from NYSDEC, DER - Region 9, to GrafTech, dated April 16, 2021

(SM PRR Response Letter)

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Environmental Remediation, Region 9
270 Michigan Avenue, Buffalo, NY 14203-2915
P: (716) 851-7220 | F: (716) 851-7226
www.dec.ny.gov

April 16, 2021

Julianne Snyder
Corporate Health, Safety and Environmental Manager
GrafTech International Holdings Inc.
982 Keynote Circle
Brooklyn Heights, OH 44131

GrafTech International Holdings Inc.
Site No. 932035
Niagara (T), Niagara County
2020 Periodic Review Report

Dear Julianne Snyder:

The New York State Department of Environmental Conservation (Department) has reviewed the *2020 Periodic Review Report and Annual Site Management Plan Report* (PRR) (January 2021) for the above referenced site, submitted by GrafTech International Holdings Inc. Based on a review of the report, the Department has the following comments:

1. The Department requests hydraulic monitoring of bedrock wells GW-7B and GW-11B be continued through the 2021 reporting period; and

2. Based upon the significant increase in chlorinated volatile organic compounds (CVOCs) observed during the 2020 reporting period, the Department request that additional bedrock wells BW-1, BW-2, and BW-6 be sampled and analyzed for VOCs during the spring 2021 sampling event to further evaluate impacts to groundwater in the vicinity of the capped landfill unit.

Please submit a revised report that addresses the above comments to the Department within 30 days. Should you have any questions or would like to discuss the matter in further detail, feel free to contact me at andrew.zwack@dec.ny.gov or (716) 851-7220.

Sincerely,

Andrew J. Zwack

Assistant Engineer
Andrew Zwack

ec: Benjamin McPherson – NYSDEC, Region 9

Appendix C

Letter from NYSDEC, DER - Region 9, to GrafTech, dated October 29, 2018

(Site Management Plan)

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Environmental Remediation, Region 9
270 Michigan Avenue, Buffalo, NY 14203-2915
P: (716) 851-7220 | F: (716) 851-7226
www.dec.ny.gov

October 29, 2018

GrafTech International Holdings, Inc.
Juanita M. Bursley
982 Keynote Circle
Brooklyn Heights, OH 44131

Dear Ms. Bursley:

Site Management Plan
GrafTech International Holdings Inc.
Niagara (T), Niagara County
DER Site No.: 932035

The Department completed its review of GrafTech's Site Management Plan submitted on October 23, 2018. This correspondence provides formal transmittal that the Site Management Plan is accepted.

Sincerely,

Brian Sadowski

Digitally signed by Brian Sadowski
DN: cn=Brian Sadowski, o=DEC, ou=DER, email=brian.sadowski@dec.ny.gov, c=US
Date: 2018.10.29 13:32:35 -04'00'

Project Manager

ec: Stan Radon, NYSDEC, Buffalo
Glenn May, NYSDEC, Buffalo

Appendix D

GHD Letter to GrafTech, Reference No. 11194450,

2021 Annual Groundwater Monitoring Results Summary Letter

2055 Niagara Falls Boulevard
Niagara Falls, New York 14304
USA
www.ghd.com

Our ref: 11194450

19 November 2021

Ms. Julianne Snyder
HSEP Manager
Graftech International Holdings, Inc.
982 Keynote Circle
Brooklyn Heights, Ohio 44131

2021 Annual Groundwater Monitoring Results Summary Letter
Former Republic Landfill, Niagara Falls, New York

Dear Ms. Snyder

GHD is presenting this 2021 Annual Groundwater Monitoring Results Summary Letter documenting the results of the annual groundwater monitoring event completed on May 11, 2021 at the Former Republic Landfill in Niagara Falls, New York (New York State Department of Environmental Conservation [NYSDEC] Site No. 932035). The monitoring event was conducted in accordance with the Field Sampling Plan (FSP) Post-Closure Monitoring Program for UCAR Carbon Solid Waste Management Unit (SWMU) No. 32NO3, prepared by Conestoga-Rovers & Associates (CRA), dated July 2000. This letter presents a summary of the completed Scope of Work and results of the annual monitoring event.

1. Scope of Work

The Scope of Work for the monitoring event consisted of the following tasks:

- Measurement of groundwater depths (hydraulic monitoring) at ten bedrock wells (BW-1 through BW-6, GW-7B, GW-8B, GW-9B, and GW-11B) and three overburden wells (MW-1 through MW-3).
- Purging and collection of groundwater samples and quality assurance samples from bedrock wells BW-3, BW-4, and GW-8B for analysis of Target Compound List (TCL) volatile organic compounds (VOCs) by United States Environmental Protection Agency (USEPA) Method SW-846 8260C.
- Preparation of a groundwater monitoring letter report documenting the monitoring activities.

The results of the monitoring event are summarized below. The field notes for the monitoring event are located in Attachment A.

2. Hydraulic Monitoring

Prior to sampling, GHD measured static water levels and well depths in bedrock wells BW-1 through BW-6, GW-7B, GW-8B, GW-9B, and GW-11B and in overburden wells MW-1 through MW-3 using an electronic water level tape. Measurements were collected from the top of the well's reference point (either top of casing or top of riser, depending on the well) and were completed to the nearest 0.01 foot. Table 2.1 below presents the collected depth to water measurements and calculated groundwater elevations. Table 2.2 below presents the sounded well depths. Wells BW-1 through BW-6 were last redeveloped on April 24 and 25, 2019. The sounded well depths following the April 2019 redevelopment, as well as the reported installed well depths, are shown for comparison.

Table 1 Water Levels and Groundwater Elevations – May 11, 2021

Well ID	Well Type	Reference Point Elevation (ft. AMSL)	Depth to Water (ft. $BTOR_f$)	Groundwater Elevation (ft. AMSL)
MW-1	Overburden	611.13 (TOC)	10.81	600.32
MW-2	Overburden	611.62 (TOR)	8.67	602.95
MW-3	Overburden	601.80 (TOR)	4.64	597.16
BW-1	Bedrock	611.66 (TOC)	13.54	598.12
BW-2	Bedrock	608.40 (TOC)	10.73	597.67
BW-3	Bedrock	605.02 (TOC)	7.24	597.78
BW-4	Bedrock	607.13 (TOC)	7.76	599.37
BW-5	Bedrock	603.27 (TOC)	5.26	598.01
BW-6	Bedrock	611.11 (TOC)	11.47	599.64
GW-7B	Bedrock	603.81 (TOC)	6.79	597.02
GW-8B	Bedrock	603.30 (TOR)	7.14	596.16
GW-9B	Bedrock	602.74 (TOR)	10.89	591.85
GW-11B	Bedrock	601.40 (TOR)	3.86	597.54

Notes:

Ft AMSL – Feet above mean sea level
Ft. BTOR – Feet below top of reference point
TOC – Top of casing
TOR – Top of riser

Table 2 Sounded Well Depths – May 11, 2021

Well ID	Well Type	Sounded Depth (ft. $BTOR_f$)	Sounded Depth after April 2019 Redevelopment (ft. $BTOR_f$)	Installed Depth (ft. $BTOR_f$)
MW-1	Overburden	23.35	NA	20.88
MW-2	Overburden	24.63	NA	24.68
MW-3	Overburden	15.34	NA	15.93
BW-1	Bedrock	28.92	29.00	37.11
BW-2	Bedrock	27.68	27.63	38.03
BW-3	Bedrock	25.07	25.00	25.42
BW-4	Bedrock	27.07	27.10	27.80
BW-5	Bedrock	28.71	28.75	28.57
BW-6	Bedrock	25.74	30.40	36.42

Table 2 Sounded Well Depths – May 11, 2021

Well ID	Well Type	Sounded Depth (ft. $BTOR_f$)	Sounded Depth after April 2019 Redevelopment (ft. $BTOR_f$)	Installed Depth (ft. $BTOR_f$)
GW-7B	Bedrock	33.79	NA	33.71
GW-8B	Bedrock	29.12	NA	29.42
GW-9B	Bedrock	31.99	NA	31.69
GW-11B	Bedrock	28.20	NA	27.73

Notes:

Ft. BTOR – Feet below top of reference point
NA – Not applicable

Figures 2.1 and 2.2 present potentiometric surface maps for the observed groundwater elevations in the overburden and bedrock, respectively. Based on the maps, groundwater was flowing in a general east-southeasterly direction in the overburden and, in general, radially off the landfill in southeasterly, southwesterly, and northwesterly directions in the bedrock during the monitoring event. These groundwater flow directions are generally consistent with groundwater flow directions observed during previous monitoring events.

3. Groundwater Quality Monitoring

3.1 Sample Collection

Following measurement of static water levels, GHD purged and sampled wells BW-3, BW-4, and GW-8B using a Masterflex® peristaltic pump with ¼-inch diameter Teflon tubing following USEPA low-flow sampling procedures. During the purging activities, field parameters (temperature, pH, specific conductivity, dissolved oxygen, oxidation-reduction potential, and turbidity) were measured in approximate 5-minute intervals. Attachment B presents the field parameters collected during the well purging. In accordance with the FSP, purge waters were discharged to the ground surface following the sampling event.

Following completion of purging, GHD collected groundwater samples from BW-3, BW-4, and GW-8B for analysis of TCL VOCs via USEPA Method SW-846 8260C. One field duplicate sample was collected from BW-4 and a matrix spike/matrix spike duplicate (MS/MSD) sample set was collected from BW-3. A trip blank prepared by the laboratory accompanied the sample bottles at all times and was also analyzed for VOCs. The samples were submitted on ice under standard chain of custody procedures to Eurofins TestAmerica Laboratories, Inc. in Amherst, New York, a New York State Department of Health (NYSDOH) Environmental Laboratory Approval Program (ELAP) certified laboratory.

3.2 Analytical Results

The laboratory analytical data report for the groundwater samples submitted for analysis is included as Attachment C. Table 3.1 presents the analytical results. According to the laboratory report, the following analytes were detected at concentrations above the NYSDEC Class GA Standards and Guidance Values ("criteria"):

- BW-3: Vinyl chloride (VC)
- BW-4: Cis-1,2-dichloroethylene (cis-1,2-DCE), tetrachloroethylene (PCE), trichloroethylene (TCE), and VC
- GW-8B: VC and cis-1,2-DCE

A GHD chemist completed a reduced data validation on the laboratory analytical data package from the sampling event. The chemist concluded that the laboratory data are acceptable without qualification. The data validation memo is included as Attachment D.

3.3 Trends Analysis

Table 3.2 presents the current and historical concentration data for BW-3, BW-4, and GW-8B for PCE, TCE, cis-1,2-DCE, and VC. Although other VOCs have been detected in these wells, they have only been detected intermittently and at levels below or only slightly above criteria. The four above-listed VOCs have collectively been detected consistently and at elevated concentrations in these three bedrock wells, and, as such, their concentrations have been monitored through time. Figures 3.1 through 3.3 present the historical concentration data for these four VOCs from March 2000 to the present. Where duplicate samples were collected, the average concentrations detected among the duplicate samples are shown. The following is a brief discussion of the May 2021 sampling results relative to historical concentrations for these four VOCs in the three bedrock wells sampled.

BW-3 (Figure 3.1)

- VC was detected at a concentration of 9.1 micrograms per liter (µg/L) in May 2021, which was above the criteria of 2 µg/L. Concentrations of VC have either been non-detect or below 10 µg/L since September 2001 and have exhibited minor fluctuations throughout this time period.
- cis-1,2-DCE was detected at a concentration of 2.5 µg/L in May 2021 and has not been detected at concentrations at or above the criteria of 5 µg/L from March 2000 to the present.
- PCE and TCE were non-detect in May 2021 and have been non-detect since March 2000. As such, they are not shown on Figure 3.1.

BW-4 (Figure 3.2)

- cis-1,2-DCE was detected at a concentration of 570 µg/L (480 µg/L in the duplicate) in May 2021, which was above the criteria of 5 µg/L. Concentrations of cis-1,2-DCE have been above criteria since March 2000. Concentrations had been gradually increasing overall since March 2000, with relatively large fluctuations observed from September 2010 to October 2014 and from May 2019 to September 2020. The concentration detected in May 2021 was the lowest concentration detected since March 2005. Future monitoring events will aid in determining if the decreased concentration is a fluctuation in the overall pattern of gradually increasing concentrations or if concentrations will remain decreased.
- PCE was detected at a concentration of 200 µg/L (190 µg/L in the duplicate) in May 2021, which was above the criteria of 5 µg/L. Concentrations of PCE have been above criteria since March 2000 and were relatively stable from March 2000 to May 2013, and from October 2014 through May 2019, though at higher concentrations. Future monitoring events will aid in determining if the concentration detected in May 2021 is part of an apparent long-term stable trend, with some fluctuation.
- TCE was detected at a concentration of 300 µg/L (260 µg/L in the duplicate) in May 2021, which was above the criteria of 5 µg/L. Concentrations of TCE have been above criteria since March 2000 and increased from March 2009 to October 2014. Concentrations had been decreasing from October 2014 through May 2019. Future monitoring events will aid in determining if the concentration detected in May 2021 is part of this overall decreasing trend.
- VC was detected at a concentration of 89 µg/L (72 µg/Lin the duplicate) in May 2021, which was above the criteria of 2 µg/L. Concentrations of VC have been above criteria since March 2000 and gradually increased from March 2000 to October 2014. Concentrations appeared to have stabilized from October 2014 through May 2019. Future monitoring events will aid in determining if the concentration detected in May 2021 is part of an apparent long-term stable trend, with some fluctuation.

GW-8B (Figure 3.3)

- cis-1,2-DCE was detected at a concentration of 20 µg/L in May 2021, which was above the criteria of 5 µg/L. Concentrations of cis-1,2-DCE have been above criteria since March 2000, with the exception of a non-detect in September 2003, but appear to have remained stable since April 2004.
- VC was detected at a concentration of 3.2 µg/L in May 2021, which was above the criteria of 2 µg/L. VC was non-detect from March 2000 to March 2005 and has been detected at concentrations slightly above criteria

since September 2006, with the exception of a non-detect in March 2007 and concentrations in May 2015 and May 2017 that were slightly below criteria. Concentrations appear to have remained stable since September 2006.

- TCE was detected at a concentration of 3.6 µg/L in May 2021, which was below the criteria of 5 µg/L. Concentrations have exhibited an overall long-term decrease since March 2003.
- PCE was non-detect in May 2021 and has been non-detect since March 2000. As such, PCE is not shown on Figure 3.3.

Concentrations of VOCs detected in bedrock wells BW-3 and GW-8B were generally consistent with the concentrations detected during the September 2020 sampling event. The current and historical data has shown that concentrations of VOCs in well BW-3 remain low, with only VC present at concentrations slightly above criteria. This well was hydraulically downgradient of the landfill during the May 2021 monitoring event, but has been shown to be hydraulically upgradient of the landfill during some previous monitoring events. These shifts in gradient direction may be due to seasonality, as monitoring events have alternated between spring and fall. Concentrations of VOCs in GW-8B, which is hydraulically downgradient of the landfill, also remain low and have either stabilized or are decreasing. Concentrations of VOCs detected in bedrock well BW-4 have decreased since the September 2020 sampling event.

Based on the decreasing or stable concentrations of VOCs observed in well BW-3 and GW-8B, no discernable negative trend in groundwater quality was observed for the Site. Concentrations of VOCs in BW-4, which is hydraulically upgradient of the landfill based on the current and historical gauging events, remain elevated and have typically been 2 to 3 orders of magnitude higher than the VOC concentrations in the other bedrock monitoring wells. This strongly suggests an off-Site source.

4. Closing/Recommendations

Results from the 2021 groundwater monitoring activities indicate that concentrations of cis-1,2-DCE, PCE, TCE, and VC are consistent with previous results. The groundwater monitoring program for the past 30 years since closure of the landfill has identified no negative trends in the groundwater quality associated with the landfill. VOC concentrations in well BW-4, which is upgradient of the landfill, were significantly lower in 2021 relative to recent years, but are typically 2 to 3 orders of magnitude higher than VOC concentrations detected in the other bedrock wells at the Site. This strongly suggests an off-Site source. The next groundwater monitoring event will occur in September 2022.

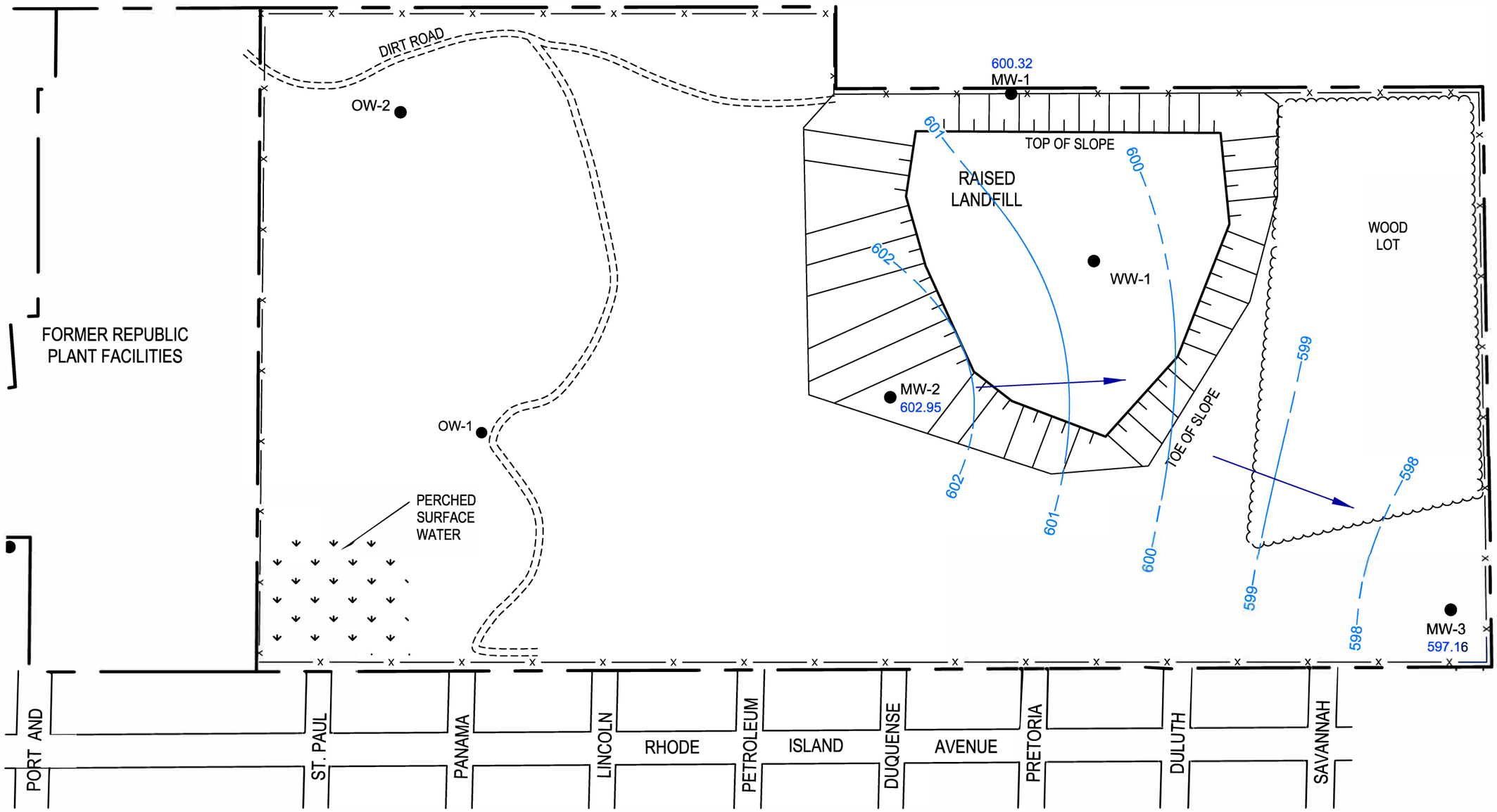
GHD appreciates the opportunity to conduct this work. If you have any questions regarding this or require additional assistance, please contact the undersigned at 716-297-6150 or margaret.popek@ghd.com.

Regards

Margaret A. Popek

Margaret Popek
Geologist

716.205.1973
Maggie.Popek@ghd.com



LEGEND

- MW-3 — OVERBURDEN MONITORING WELL LOCATION
- 597.16 — GROUNDWATER ELEVATION (FT) AMSL
- PROPERTY LINE
- FENCE
- APPROXIMATE GROUNDWATER FLOW DIRECTION
- GROUNDWATER ELEVATION CONTOUR (FT) AMSL
- CONTOUR INFERRED

N

0 200'

GHD

FORMER REPUBLIC LANDFILL
NIAGARA FALLS, NEW YORK

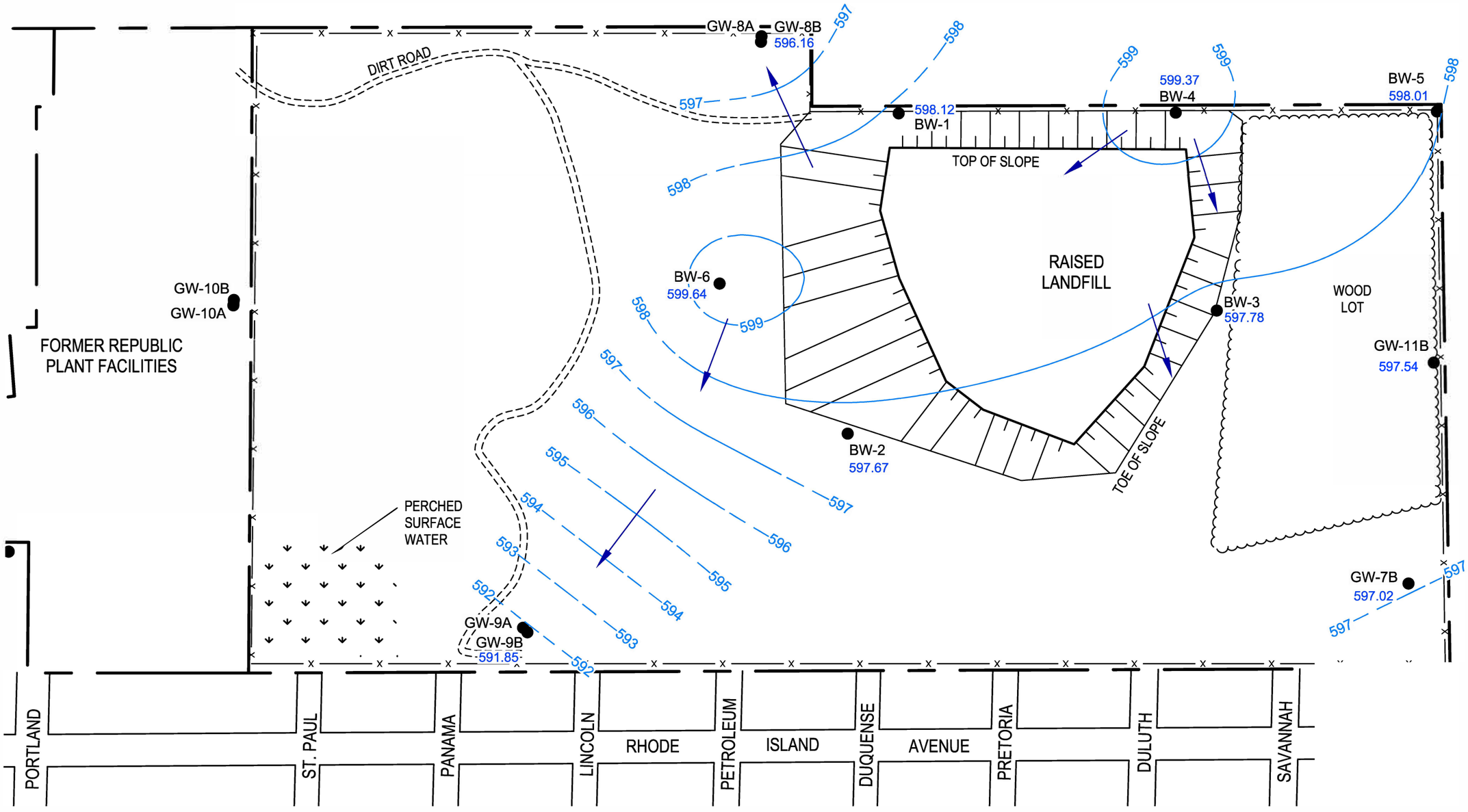
OVERBURDEN GROUNDWATER POTENTIOMETRIC SURFACE MAP (MAY 11, 2021)

Project No. **11194450**
Date **November 21**

FIGURE 2.1

Data Source

Filename: N:\US\Niagara Falls\Projects\564\11194450\Digital_Design\ACAD 2018\Figures\May 2021 Groundwater Contours\11194450-FIG 2.1-May 2021 Overburden Groundwater Potentiometric Surface Map.dwg
Plot Date: 19 November 2021 6:27 AM



LEGEND

- BW-1 — BEDROCK MONITORING WELL LOCATION
- 591.85 — GROUNDWATER ELEVATION (FT) AMSL
- PROPERTY LINE
- FENCE
- APPROXIMATE GROUNDWATER FLOW DIRECTION
- GROUNDWATER ELEVATION CONTOUR (FT) AMSL
- CONTOUR INFERRED

N

0 200'

GHD

FORMER REPUBLIC LANDFILL
NIAGARA FALLS, NEW YORK

BEDROCK GROUNDWATER POTENTIONMETRIC SURFACE MAP (MAY 11, 2021)

Project No. **11194450**
Date **November 21**

FIGURE 2.2

Data Source

Filename: N:\US\Niagara Falls\Projects\564\11194450\Digital_Design\ACAD 2018\Figures\May 2021 Groundwater Contours\11194450-FIG 2.2-May 2021 Bedrock Groundwater Potentiometric Surface Map.dwg
Plot Date: 19 November 2021 6:27 AM

Figure 3.1
Historical Data Graph
Well BW-3

Former Republic Landfill

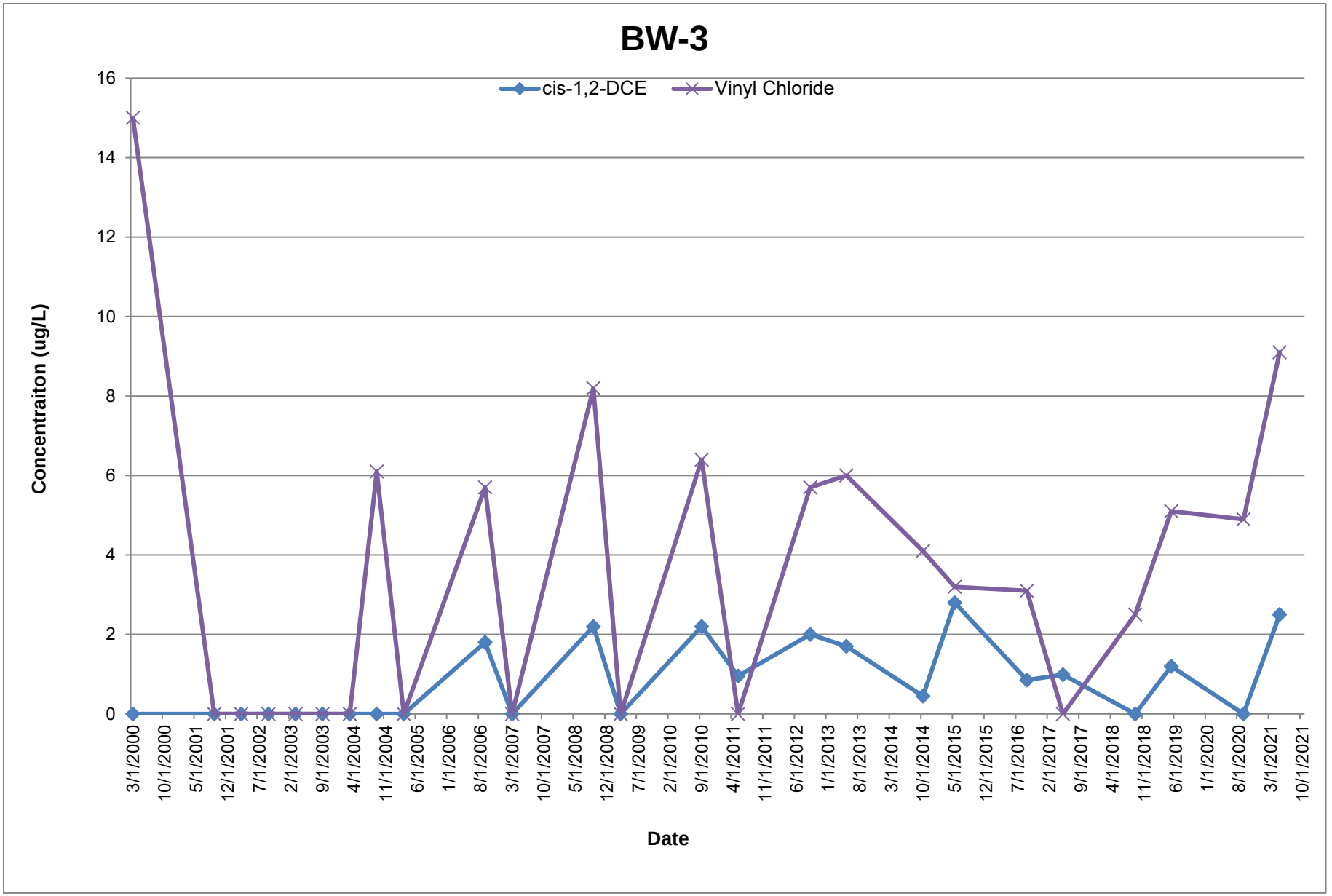


Figure 3.2
Historical Data Graph
Well BW-4

Former Republic Landfill

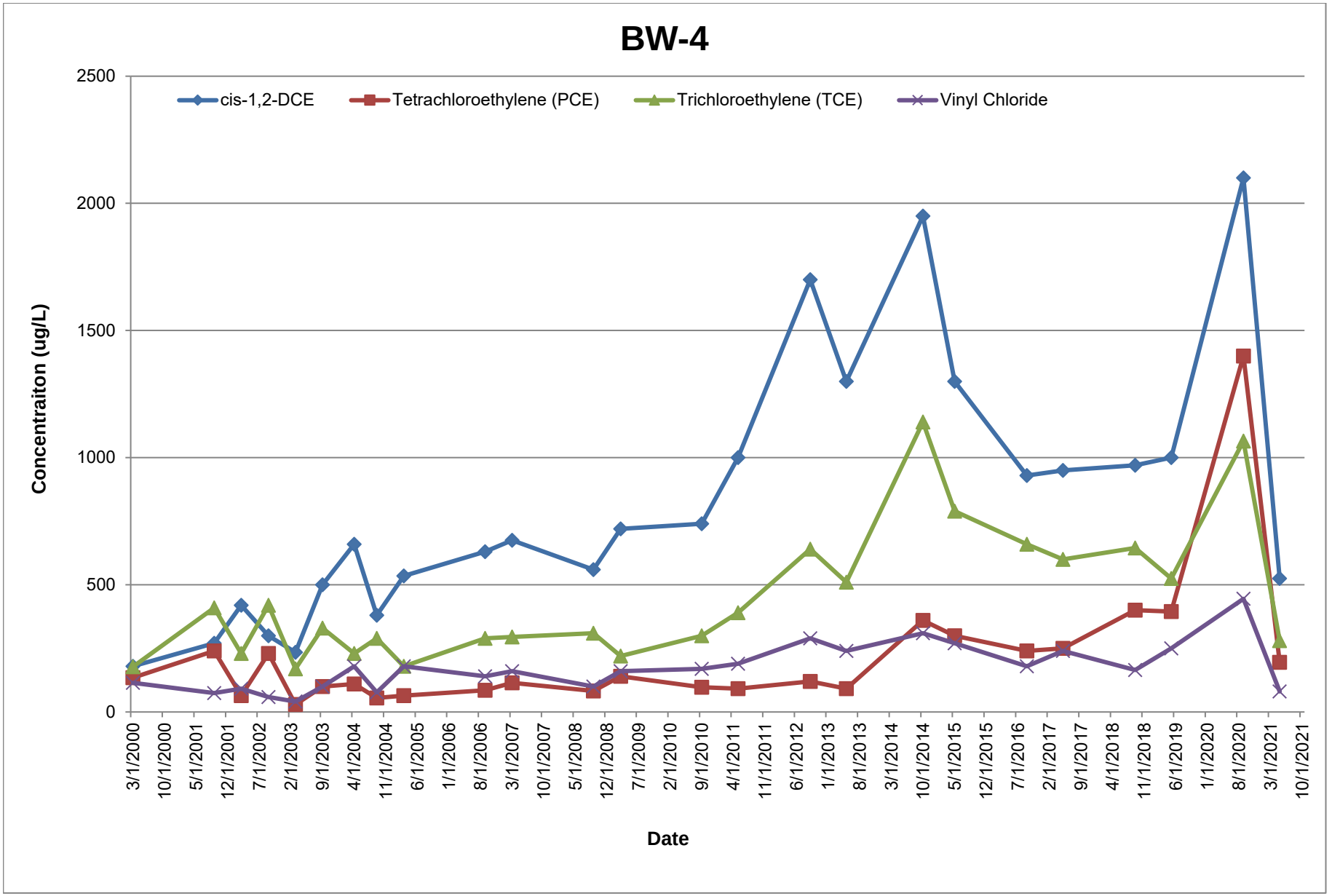


Figure 3.3
Historical Data Graph
Well GW-8B

Former Republic Landfill

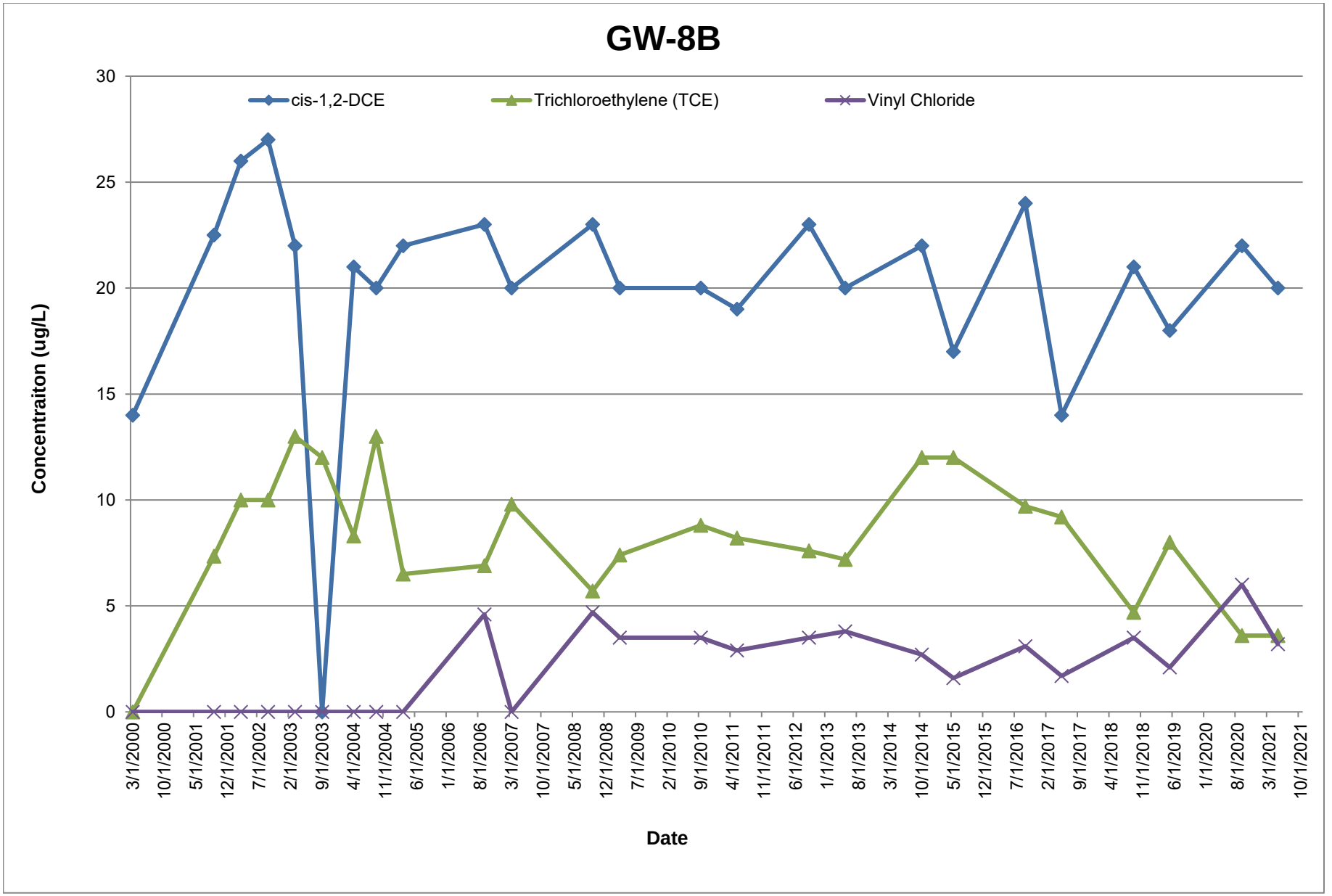


Table 3.1

Analytical Results Summary
Annual Groundwater Monitoring Program
GrafTech International Holdings, Inc.
Niagara Falls, New York
May 2021

Location ID:			BW-3	BW-4	BW-4	GW-8B
Sample Name:			WG-11194450-051121-DT-002	WG-11194450-051121-DT-003	WG-11194450-051121-DT-004	WG-11194450-051121-DT-001
Sample Date:			05/11/2021	05/11/2021	05/11/2021 Duplicate	05/11/2021
Parameters	**Unit**	**NYSDEC Class GA Criteria/TOGS**				
Volatile Organic Compounds						
1,1,1-Trichloroethane	µg/L	5	1.0 U	20 U	20 U	1.0 U
1,1,2,2-Tetrachloroethane	µg/L	5	1.0 U	20 U	20 U	1.0 U
1,1,2-Trichloroethane	µg/L	1	1.0 U	20 U	20 U	1.0 U
1,1-Dichloroethane	µg/L	5	1.0 U	20 U	20 U	1.0 U
1,1-Dichloroethene	µg/L	5	1.0 U	20 U	20 U	1.0 U
1,2-Dichloroethane	µg/L	0.6	1.0 U	20 U	20 U	1.0 U
1,2-Dichloroethene (total)	µg/L	5	2.5	570	480	20
1,2-Dichloropropane	µg/L	1	1.0 U	20 U	20 U	1.0 U
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	50	10 U	200 U	200 U	10 U
2-Hexanone	µg/L	50	5.0 U	100 U	100 U	5.0 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	--	5.0 U	100 U	100 U	5.0 U
Acetone	µg/L	50	10 U	200 U	200 U	10 U
Benzene	µg/L	1	1.0 U	20 U	20 U	1.0 U
Bromodichloromethane	µg/L	50	1.0 U	20 U	20 U	1.0 U
Bromoform	µg/L	5	1.0 U	20 U	20 U	1.0 U
Bromomethane (Methyl bromide)	µg/L	5	1.0 U	20 U	20 U	1.0 U
Carbon disulfide	µg/L	60	1.0 U	20 U	20 U	1.0 U
Carbon tetrachloride	µg/L	5	1.0 U	20 U	20 U	1.0 U
Chlorobenzene	µg/L	5	1.0 U	20 U	20 U	1.0 U
Chloroethane	µg/L	5	1.0 U	20 U	20 U	1.0 U
Chloroform (Trichloromethane)	µg/L	7	1.0 U	20 U	20 U	1.0 U
Chloromethane (Methyl chloride)	µg/L	5	1.0 U	20 U	20 U	1.0 U
cis-1,2-Dichloroethene	µg/L	5	2.5	570	480	20
cis-1,3-Dichloropropene	µg/L	0.4	1.0 U	20 U	20 U	1.0 U
Dibromochloromethane	µg/L	50	1.0 U	20 U	20 U	1.0 U
Ethylbenzene	µg/L	5	1.0 U	20 U	20 U	1.0 U
Methylene chloride	µg/L	5	1.0 U	20 U	20 U	1.0 U
Styrene	µg/L	5	1.0 U	20 U	20 U	1.0 U
Tetrachloroethene	µg/L	5	1.0 U	200	190	1.0 U
Toluene	µg/L	5	1.0 U	20 U	20 U	1.0 U
trans-1,2-Dichloroethene	µg/L	5	1.0 U	20 U	20 U	1.0 U
trans-1,3-Dichloropropene	µg/L	0.4	1.0 U	20 U	20 U	1.0 U
Trichloroethene	µg/L	5	1.0 U	300	260	3.6
Vinyl chloride	µg/L	2	9.1	89	72	3.2
Xylenes (total)	µg/L	5	2.0 U	40 U	40 U	2.0 U

Notes:

U - Not detected at the associated reporting limit
TOGS - Technical and Operational Guidance Series
- Boxed values are greater than regulatory limit

Table 3.2

Summary of Bedrock Well Analytical Results: PCE, TCE, cis-1,2-DCE, and Vinyl Chloride
March 2000 - May 2021

Well Number	Parameter	Groundwater Criteria (ppb)	March 2000 (ppb)	Sept. 2001 (ppb)	March 2002 (ppb)	Sept. 2002 (ppb)	March 2003 (ppb)	Sept. 2003 (ppb)	March/April 2004 (ppb)	Sept. 2004 (ppb)	March 2005 (ppb)	Sept. 2006 (ppb)	March 2007 (ppb)
BW-3	Cis-1,2-DCE	5	10U	5U	5U	5U	5U	5U	5U	5U	5U	1.8	5U
	PCE	5	10U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U
	TCE	5	10U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U
	Vinyl Chloride	2	**15**	5U	5U	5U	5U	5U	5U	**6.1**	5U	**5.7**	5.0U
GW-8B	Cis-1,2-DCE	5	**14**	**23 (22)**	**26**	**27**	**22**	5U	**21**	**20**	**22**	**23**	**20**
	PCE	5	10U	5U (5U)	5U	5U	5U	5U	5U	5U	5U	5U	5U
	TCE	5	10U	**7.5 (7.2)**	**10**	**10**	**13**	**12**	**8.3**	**13**	**6.5**	**6.9**	**9.8**
	Vinyl Chloride	2	10U	5U (5U)	5U	5U	5U	5U	5U	5U	5U	**4.6J**	5.0U
BW-4	Cis-1,2-DCE	5	**180**	**270**	**420**	**300**	**230 (240)**	**500**	**660**	**370 (390)**	**540 (530)**	**620 (620)**	**710 (640)**
	PCE	5	**135**	**240**	**64**	**230**	**29 (30)**	**100**	**110**	**55 (56)**	**64 (65)**	**84 (86)**	**120 (110)**
	TCE	5	**178**	**410**	**230**	**420**	**170 (170)**	**330**	**230**	**290 (290)**	**180 (180)**	**290 (290)**	**310 (280)**
	Vinyl Chloride	2	**115**	**74**	**92**	**59**	**41 (41)**	**100**	**180**	**75 (79)**	**180 (180)**	**140 (140)**	**170 (150)**

Shaded cells indicate the concentrations exceeds the New York State Class GA Groundwater Criteria

Parentheses indicate the results of the duplicate sample

* - Concentration represents total 1,2-DCE

** - Concentration represents total DCE

J - Concentration is an estimated value

U - Not present at or above the associated value

Table 3.2

Summary of Bedrock Well Analytical Results: PCE, TCE, cis-1,2-DCE, and Vinyl Chloride
March 2000 - May 2021

Well Number	Parameter	Groundwater Criteria (ppb)	Sept. 2008 (ppb)	March 2009 (ppb)	Sept. 2010 (ppb)	May 2011 (ppb)	Sept. 2012 (ppb)	May 2013 (ppb)	Oct. 2014 (ppb)	May 2015 (ppb)	Sept. 2016 (ppb)	May 2017 (ppb)	Sept. 2018 (ppb)	May 2019 (ppb)	September 2020 (ppb)
BW-3	Cis-1,2-DCE	5	2.2	10U*	2.2J*	0.95J**	2	1.7	0.45	2.8	0.85	0.99	1.0U	1.2	1.0U
	PCE	5	5U	5U	5U	0.42U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
	TCE	5	5U	5U	5U	0.30U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
	Vinyl Chloride	2	**8.2**	5.0U	**6.4**	0.3U	**5.7**	**6.0**	**4.1**	**3.2**	**3.1**	1.0U	**2.5**	**5.1**	**4.9**
GW-8B	Cis-1,2-DCE	5	**23**	**20***	**20***	**19****	**23**	**20**	**22**	**17**	**24**	**14 (14)**	**21.0**	**18**	**22**
	PCE	5	5U	5U	5U	0.42U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
	TCE	5	**5.7**	**7.4**	**8.8**	**8.2**	**7.6**	**7.2**	**12**	**12**	**9.7**	**9.2 (9.2)**	4.7	**8.0**	3.6
	Vinyl Chloride	2	**4.7J**	**3.5J**	**3.5J**	**2.9J**	**3.5**	**3.8**	**2.7**	1.6	**3.1**	1.7	**3.5**	**2.1**	**6.0**
BW-4	Cis-1,2-DCE	5	**580 (540)**	**720***	**740***	**1000****	**1700**	**1300**	**2200 (1700)**	**1300**	**930J**	**950**	**1000 (940)**	**1000 (1000)**	**2300 (1900)**
	PCE	5	**86 (79)**	**140J**	**97**	**92**	**120**	**92**	**390 (330)**	**300**	**240**	**250**	**390 (410)**	**390 (400)**	**1600 (1200)**
	TCE	5	**320 (300)**	**220J**	**300**	**390**	**640**	**510**	**1300 (980)**	**790**	**660J**	**600**	**650 (640)**	**510 (540)**	**1200 (930)**
	Vinyl Chloride	2	**100 (100)**	**160J**	**170**	**190**	**290**	**240**	**350 (270)**	**270**	**180**	**240**	**150 (180)**	**230 (270)**	**480 (410)**

Shaded cells indicate the concentrations exceeds the New York State Class GA Groundwater Criteria
Parentheses indicate the results of the duplicate sample
* - Concentration represents total 1,2-DCE
** - Concentration represents total DCE
J - Concentration is an estimated value
U - Not present at or above the associated value

Table 3.2

Summary of Bedrock Well Analytical Results: PCE, TCE, cis-1,2-DCE, and Vinyl Chloride
March 2000 - May 2021

Well Number	Parameter	Groundwater Criteria (ppb)	May 2021 (ppb)
BW-3	Cis-1,2-DCE	5	2.5
	PCE	5	1.0U
	TCE	5	1.0U
	Vinyl Chloride	2	**9.1**
GW-8B	Cis-1,2-DCE	5	**20**
	PCE	5	1.0U
	TCE	5	3.6
	Vinyl Chloride	2	**3.2**
BW-4	Cis-1,2-DCE	5	**570 (480)**
	PCE	5	**200 (190)**
	TCE	5	**300 (260)**
	Vinyl Chloride	2	**89 (72)**

Shaded cells indicate the concentrations exceeds the New York State Class GA Groundwater Criteria
Parentheses indicate the results of the duplicate sample
* - Concentration represents total 1,2-DCE
** - Concentration represents total DCE
J - Concentration is an estimated value
U - Not present at or above the associated value

Fir

Attachment A

Field Notes

Graftech Annual GW Sampling

May 11, 2021

Project # 11194450-06
Field File

Field Data Record Form
Meter, Turbidity (Portable) Hach 2100P and 2100Q

(QSF-421D)

Control number: NF08319
Date (mm/dd/yyyy): 05/11/2021
User (print name): D. Tyran

Project number: 11194450-06
Project name: Graftech

Location: Witmar & Hyde Park Blvd

Additional equipment control numbers and descriptions:

10 NTU LOT # A0160 exp. 9/2021
100 NTU LOT # A0163 exp 9/2021
800 NTU LOT # A0163 exp 9/2021

Field procedure before use:

Do not calibrate in the field.

	Check when completed
Check kit contents;	
• Meter	☒
• STABLCAL standards (2100Q)	☒
• Low 0-10, medium 0-100, high standards (2 100P)	☒
• Extra AA batteries	☒
• Sample vials	☒
Test and record standards:	☒

Gelex (2100P)/STABLCAL (2100Q) Standard	*Meter Reading*
10	9.98
100	97.1
800	788

Note: Condensation on outside of sample bottles affects meter readings.

Filing: Field file

Signature: D. Tyran

This completed form is a quality record

Groundwater Sampling Equipment and Supply Checklist
(Form SP-05)

Date: 05/11/2021 (mm/dd/yyyy)

Reference No. 11194450-06

Equipment

- [x] Required sampling equipment (as per work plan or QAPP)

Instruments

- [x] Water level indicator
- [x] Thermometer *
- [x] pH meter *
- [x] Conductivity probe *
- [x] Turbidity meter
- [ ] HNu/OVA/Microtip
- [ ] Air monitoring equipment

Supplies

- [ ] Gasoline can/gas
- [ ] Polypropylene rope
- [ ] Aluminum foil
- [x] Paper towels / Rags
- [x] pH buffer solution(s)
- [x] Conductivity standard solution(s)
- [x] Decontamination fluids (as per work plan and QAPP)
- [x] Sample jars (extra)
- [x] Sample jar labels (GHD) materials
- [x] Cooler(s)/ice packs/packing materials
- [ ] Trash bags
- [ ] Sample preservatives
- [x] Plastic spray bottles
- [ ] Plastic basin or pan
- [ ] Sample filter (on line or external filter)
- [ ] Polyethylene sheeting
- [x] First aid kit
- [x] Personal protective equipment (as per HASP)

Documentation

- [x] Chain of custody forms
- [ ] Well logs
- [x] Notebook/Field book
- [ ] Photolog
- [ ] Site pass/badge
- [ ] Federal Express manifests
- [x] Previous well logs/previous historical well data
- [x] Site map
- [x] Blank well data forms

Miscellaneous

- [x] Well cap keys
- [ ] Bolt cutters
- [ ] Camera/film
- [x] Knife
- [x] Spare batteries for instruments
- [ ] Lock deicer (winter)
- [x] Reinforced packing tape
- [x] Pen/pencil/indelible marking pen
- [x] Tool box
- [ ] Spare locks/keys
- [ ] On site transportation (all-terrain vehicle/snowmobiles)

Completed By: David Tyran (please print)

Date: 05/11/2021 (mm/dd/yyyy)

Project Planning Completion and Follow-Up Checklist
(Form SP-02)

Date: 05/11/2021 (mm/dd/yyyy) Reference No. 11194450-06

Prior Planning and Coordination

- [x] Confirm well numbers, location and accessibility
- [x] Review of project documents, Health and Safety Plan (HASP), sampling Quality Assurance/Quality Control (QA/QC) and site-specific sampling requirements
- [x] Historical well data; depth, pH, performance and disposition of purge water
- [x] Site access notification and coordination
- [x] Coordination with laboratory through GHD chemistry group
- [x] Procurement, inventory and inspection of all equipment and supplies
- [x] Prior equipment preparation, calibration or maintenance
- [ ] NA All utilities located and approved

Filed Procedure

- [x] Instruments calibrated daily
- [x] Sampling equipment decontaminated in accordance with the QAPP
- [x] Field measurements and sampling details logged in appropriate field books or an appropriate field form
- [x] Well volume calculated and specified volumes removed
- [x] Specified samples, and QA/QC samples taken per Quality Assurance Project Plan (QAPP)
- [x] Samples properly labeled, preserved and packed
- [x] Sampling locations secured or completed according to work plan
- [x] Sample date times, locations and sample numbers have all been recorded in applicable log(s)
- [x] Samples have been properly stored if not shipped/delivered to lab same day
- [x] Samples were shipped with complete and accurate chain of custody record

Follow-Up Activities

- [x] Questionable measurements field verified
- [x] Confirm all samples collected
- [x] All equipment has been maintained and returned
- [x] Sampling information reduced and required sample keys and field data distributed
- [x] Chain of custody records filed
- [x] Expendable stock supplies replaced
- [x] GHD and client-controlled items returned (i.e., keys)
- [x] Arrange disposal of investigation generated wastes with client
- [x] Confirm all samples collected

Completed By: David Tyran (please print) Date: 05/11/2021 (mm/dd/yyyy)

Water Level Measurement Equipment and Supply Checklist
(Form SP-10)

Date: 05/11/21 (mm/dd/yyyy)

Reference No. 11194450-06

Instruments

- [x] Water level indicator
- [ ] Steel tape
- [ ] Oil/Water interface probe
- [ ] Air monitoring equipment

Supplies

- [ ] Foil
- [ ] Tyveks (assorted sizes and types)
- [x] Paper towels / Rags
- [x] Decontamination fluids
  - [ ] 2 - Propanol
  - [x] Deionized water
  - [ ] Hexane (pesticide grade)
  - [ ] Methanol (pesticide grade)
  - [ ] Other
- [x] Trash bags
- [x] Plastic spray bottles

Personal Protective Equipment

- [ ] Latex gloves
- [ ] Hard hats/liner(s)
- [x] Field overboots
- [x] Work gloves (cotton and chemical resistant)
- [x] Safety glasses/or side shields on
- [ ] OSHA-approved prescription lenses
- [x] First aid kit
- [ ] Respirators
- [x] Check health and safety plan

Documentation

- [ ] Well logs
- [x] Notebook/Field book
- [ ] Photolog
- [ ] Site pass/badge
- [x] Previous well logs/previous historical well data
- [x] Site map
- [x] Blank well data forms

Miscellaneous

- [x] Well cap keys
- [ ] Bolt cutters
- [ ] Camera/Film
- [x] Knife
- [x] Spare batteries for instruments
- [ ] Lock deicer (winter)
- [x] Pen/Pencil/Indelible marking pen
- [x] Tool box
- [x] Spare locks/keys
- On site transportation (all-terrain vehicle/snowmobiles)

Completed By: David Tyran (please print)

Date: 05/11/21 (mm/dd/yyyy)

Field Data Record Form
Water Level Meter

Control number: 08044
Date (mm/dd/yyyy): 05/11/2021
User (print name): D. Tyran

Project number: 11194450-06
Project name: Graftech Annual GW Sampling
Location: Witmer Rd @ Hyde Park Blvd.

Additional equipment control numbers and descriptions:

Field procedure before use:

	Check when completed
• Check for broken or missing parts.	
• Check battery	☑
• Check operation of buzzer.	☑
• Check operation of signal light.	☑
• Test probe in water to ensure unit operates, both visually and audibly.	☑
• Check cable.	☑

Filing: Field file

Signature: David J Tyran

Graftech

DAILY LOG

5-11-21 Calibrate YSI control # NF07602
with auto cal solution lot # 20250092 expires
8/28/2021. Partly sunny 42-50 winds SW 10-15mph
Trip Blank = TB-11194450-051121-DT 2x40ml w/HCL

	Before	After
Bar 777.0 DO%	91.6	102.3
pH(4.00)	4.39	4.01
Cond(4.49)	4.63	4.50

0805 DJT on-site meet Julie Snyder.
0810 Start water level round. Site very wet had to walk to most locations.
1005 W/L's complete set up on GW-8B purge & Sample low-flow.
1125 Setup on BW-3 purge & Sample low-flow
1320 Drop Julie off @ Gate. Decon equipment, Pack Samples, finish chain
1345 DJT off-site, deliver samples to Lab

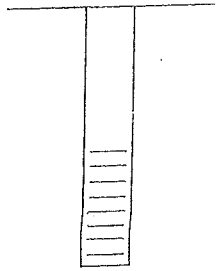
DJT 5/14/21

11194450-06

Monitoring Well Record for Low-Flow Purging
(Form SP-09)

Project Data:
Project Name: Graftech
Ref. No.: 11194450-06

Date: 5/11/21
Personnel: D. Tyran



Monitoring Well Data:
Well No.: GW-8B
Vapour PID (ppm):
Measurement Point:
Constructed Well Depth (m/ft):
Measured Well Depth (m/ft):
Depth of Sediment (m/ft):

Saturated Screen Length (m/ft):
Depth to Pump Intake (m/ft)[1]:
Well Diameter, D (cm/in):
Well Screen Volume, V_s (L)[2]:
Initial Depth to Water (m/ft): 7.13

Time	Pumping Rate (mL/min)	Depth to Water (m/ft)	Drawdown from Initial Water Level[3] (m/ft)	Temperature °C	Conductivity (mS/cm)	Turbidity NTU	DO (mg/L)	pH	ORP (mV)	Volume Purged, Vp (L)	No. of Well Screen Volumes Purged[4]
Precision Required[5]:				±3 %	±0.005 or 0.01[6]	±10 %	±10 %	±0.1 Units	±10 mV		
1014	108			9.7	1.56	1.12	3.33	6.97	173.9		
1019		7.79	0.66	9.4	1.56	0.67	3.02	7.09	158.3		
1024		7.82	0.69	9.2	1.57	1.02	2.90	7.10	151.1		
1029	100			9.5	1.49	0.57	2.29	6.55	146.6		
1034				9.7	1.58	1.07	1.25	6.17	144.6		
1039	100	7.88	0.75	9.9	1.63	0.79	0.92	5.99	140.4		
1044	110			9.3	1.67	1.04	0.71	5.92	133.7		
1049		7.91	0.78	9.0	1.67	0.95	0.71	5.93	129.3		
1054	100			9.6	1.68	0.39	0.54	5.91	123.0		
1059		7.93	0.80	9.5	1.71	1.42	0.43	5.87	118.5		
1104	104			9.2	1.71	0.92	0.45	5.91	113.6		
1109				8.8	1.73	0.46	0.46	5.90	108.7		

Sample ID: WG-11194450-05112I-DT-001

Sample Time: 1115

Notes:

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 0.6 m (2 ft) above any sediment accumulated at the well bottom.

(2) The well screen volume will be based on a 1.52 metres (5-foot) screen length (L). For metric units, $V_s=\pi*(r^2)*L$ in mL, where r (r=D/2) and L are in cm.
For imperial units, $V_s=\pi*(r^2)*L*(2.54)^3$, where r and L are in inches

(3) The drawdown from the initial water level should not exceed 0.1 m (0.3 ft). The pumping rate should not exceed 500 mL/min.

(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be stabilizing), No. of Well Screen Volumes Purged= Vp/Vs.

(5) For conductivity, the average value of three readings <1 mS/cm ±0.005 mS/cm or where conductivity >1 mS/cm ±0.01 mS/cm.

Inst. Control #'s
W/L Meter 08844
YSI NF07602
Turb NF08319

Start Purge @ 1004

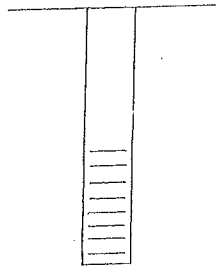
David J Tyran

MS/MSD

Monitoring Well Record for Low-Flow Purging
(Form SP-09)

Project Data:
Project Name: Graftech
Ref. No.: 11194450-06

Date: 5-11-21
Personnel: D Tyran



Monitoring Well Data:
Well No.: BW-3
Vapour PID (ppm):
Measurement Point:
Constructed Well Depth (m/ft):
Measured Well Depth (m/ft):
Depth of Sediment (m/ft):

Saturated Screen Length (m/ft):
Depth to Pump Intake (m/ft)[1]:
Well Diameter, D (cm/in):
Well Screen Volume, V_s (L)[2]:
Initial Depth to Water (m/ft): 7.21

Time	Pumping Rate (mL/min)	Depth to Water (m/ft)	Drawdown from Initial Water Level[3] (m/ft)	Temperature °C	Conductivity (mS/cm)	Turbidity NTU	DO (mg/L)	pH	ORP (mV)	Volume Purged, Vp (L)	No. of Well Screen Volumes Purged[4]
Precision Required[5]:				±3 %	±0.005 or 0.01[6]	±10 %	±10 %	±0.1 Units	±10 mV		
1131	220	7.23	0.02	8.5	1.37	7.91	1.66	5.82	66.0		
1136		7.24	0.03	8.5	1.31	4.87	0.42	5.82	45.5		
1141	220			8.5	1.19	4.20	0.31	5.84	33.2		
1146		7.26	0.05	8.7	1.14	0.87	0.29	5.85	26.5		
1151	220			8.5	1.12	1.63	0.26	5.85	23.1		
1156		7.24	0.03	8.6	1.12	0.90	0.18	5.86	20.3		
1201	220			8.4	1.11	0.31	0.19	5.86	18.0		
1206				8.6	1.11	0.61	0.17	5.86	15.8		

Sample ID: WG-11194450-051121-DT-002

Sample Time: 1210

Notes:

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 0.6 m (2 ft) above any sediment accumulated at the well bottom.

(2) The well screen volume will be based on a 1.52 metres (5-foot) screen length (L). For metric units, $V_s=\pi*(r^2)*L$ in mL, where r (r=D/2) and L are in cm.
For Imperial units, $V_s=\pi*(r^2)*L*(2.54)^3$, where r and L are in inches

(3) The drawdown from the initial water level should not exceed 0.1 m (0.3 ft). The pumping rate should not exceed 500 mL/min.

(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be stabilizing), No. of Well Screen Volumes Purged= Vp/Vs.

(5) For conductivity, the average value of three readings <1 mS/cm ±0.005 mS/cm or where conductivity >1 mS/cm ±0.01 mS/cm.

Inst. Control #S
W/L Meter 08044
Turb NF08319
YSI NF07602

Start Purge @ 1129

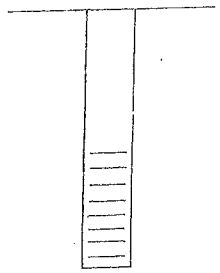
D Tyran

DUP

Monitoring Well Record for Low-Flow Purging
(Form SP-09)

Project Data:
Project Name: Graftech
Ref. No.: 11194450-06

Date: 5/11/21
Personnel: D. Tyran



Monitoring Well Data:
Well No.: BW-4
Vapour PID (ppm):
Measurement Point:
Constructed Well Depth (m/ft):
Measured Well Depth (m/ft):
Depth of Sediment (m/ft):

Saturated Screen Length (m/ft):
Depth to Pump Intake (m/ft)[1]:
Well Diameter, D (cm/in):
Well Screen Volume, V_s (L)[2]:
Initial Depth to Water (m/ft): 7.78

Time	Pumping Rate (mL/min)	Depth to Water (m/ft)	Drawdown from Initial Water Level[3] (m/ft)	Temperature °C	Conductivity (mS/cm)	Turbidity NTU	DO (mg/L)	pH	ORP (mV)	Volume Purged, Vp (L)	No. of Well Screen Volumes Purged[4]
Precision Required[5]:				±3 %	±0.005 or 0.01[6]	±10 %	±10 %	±0.1 Units	±10 mV		
1233		7.78	0.00	9.5	1.03	51.6	5.09	5.87	23.4		
1238	200			9.6	1.01	65.1	0.89	5.87	6.3		
1243				10.4	1.03	123	0.34	5.92	-2.0		
1248	168	7.78	0.00	10.6	1.01	17.7	0.23	5.95	-7.4		
1253		7.78	0.00	10.8	1.01	7.51	0.19	5.98	-13.2		
1258	180			10.2	1.01	8.55	0.17	5.99	-14.6		
1303				10.1	1.01	6.66	0.17	6.04	-16.7		

Sample ID: WG-11194450-051121-DT-003
Sample Time: 1305
Notes: Blind Dup WG-11194450-051121-DT-004

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 0.6 m (2 ft) above any sediment accumulated at the well bottom.
(2) The well screen volume will be based on a 1.52 metres (5-foot) screen length (L). For metric units, $V_s=\pi*(r^2)*L*$ in mL, where r (r=D/2) and L are in cm.
For Imperial units, $V_s=\pi*(r^2)*L*(2.54)^3$, where r and L are in inches
(3) The drawdown from the initial water level should not exceed 0.1 m (0.3 ft). The pumping rate should not exceed 500 mL/min.
(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be stabilizing), No. of Well Screen Volumes Purged= Vp/Vs.
(5) For conductivity, the average value of three readings <1 mS/cm ±0.005 mS/cm or where conductivity >1 mS/cm ±0.01 mS/cm.

Inst. Control #'S
W/L 08844
Turb NF08319
YSI NF07602

Start Purge @ 1228

Dave J Tyran

CHAIN OF CUSTODY RECORD

GHD

COC NO.: 60256

Address: Niagara Falls Office

PAGE 1 OF 1

Phone:

Fax:

Project No/ Phase/Task Code: 11144150-06	Laboratory Name: Eurofins TestAmerica	Lab Location: Amherst NY	SSOW ID:
Project Name: Griffith GW Sampling	Lab Contact: Denise Heckler		Cooler No:
Project Location: Witmer Rd & Hyde Park Blvd.			Carrier: Hand Delivered
GHD Chemistry Contact: Su Scrocchi			Airbill No:
Sampler(s): D. Tyran			Total # of Containers: 20

ANALYSIS REQUESTED (See Back of COC for Definitions)

Item	SAMPLE IDENTIFICATION (Containers for each sample may be combined on one line)	DATE (mm/dd/yy)	TIME (hh:mm)	Matrix Code (see back of COC)	Grab (G) or Comp (C)	Filtered (Y/N)	VOCs											Total Containers/sample	MS/MSD Request	COMMENTS/ SPECIAL INSTRUCTIONS:
	PRESERVATION - (SEE BACK OF COC FOR ABBREVIATIONS)						HC													
1	TB 11144150 051121 DT	5 11 21		TB	G	N	X											2		
2	WG 11144150 051121 DT 001	5 11 21	1115	WG	G	N	X											3		
3	WG 11144150 051121 DT 002	5 11 21	1210	WG	G	N	X											9	X	
4	WG 11144150 051121 DT 003	5 11 21	1305	WG	G	N	X											3		
5	WG 11144150 051121 DT 004	5 11 21	1305	WG	G	N	X											3		DT
6																				
7																				
8																				
9																				
10																				
11																				
12																				

TAT Required in business days (use separate COCs for different TATs):

☐ Other ☐ 1 Day ☐ 2 Days ☐ 3 Days ☐ 1 Week ☑ 2 Week

Notes/ Special Requirements:

RELINQUISHED BY	COMPANY	DATE	TIME	RECEIVED BY	COMPANY	DATE	TIME
1. Dave Tyran	GHD	5/11/21	1342	1.			
2.				2.			
3.				3.			

THE CHAIN OF CUSTODY IS A LEGAL DOCUMENT – ALL FIELDS MUST BE COMPLETED ACCURATELY

Distribution: WHITE – Fully Executed Copy (CRA) YELLOW – Receiving Laboratory Copy PINK – Shipper GOLDENROD – Sampling Crew

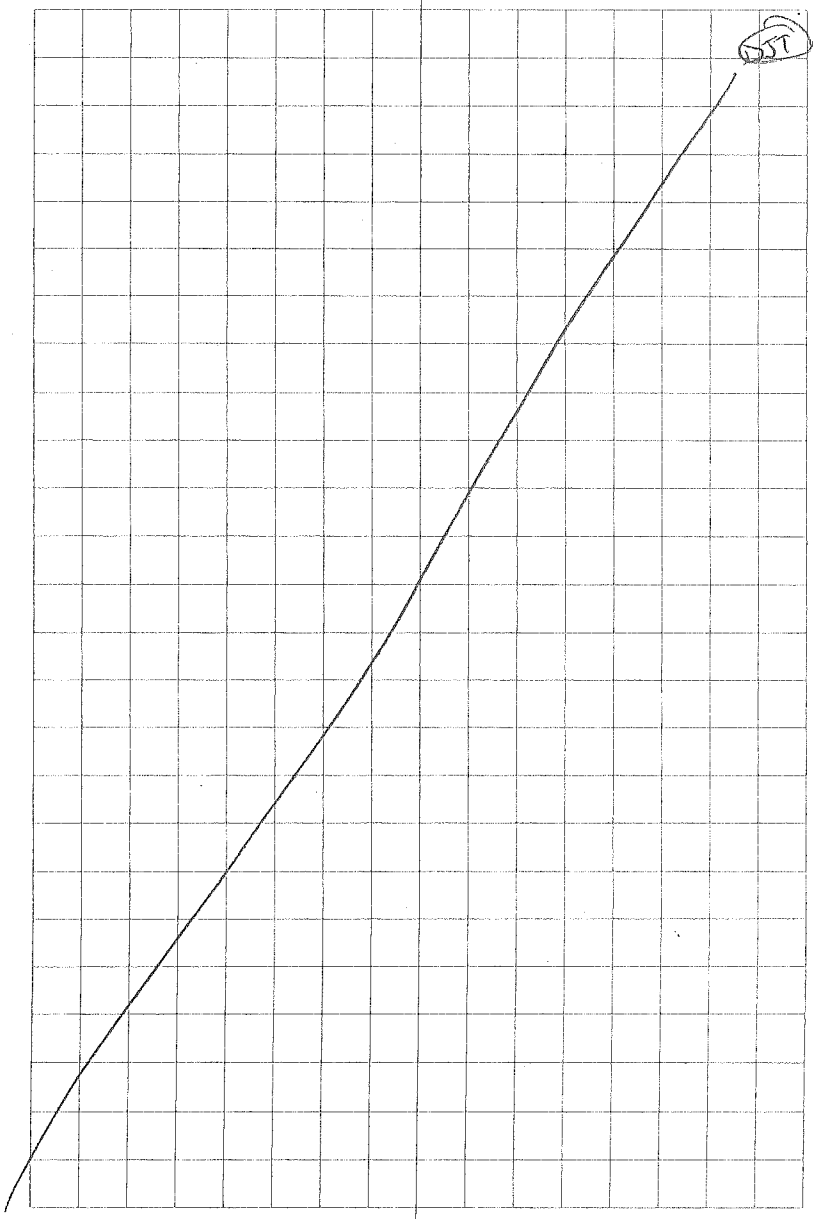
CRA Form: COC-10B (20110804)

Hydraulic Monitoring

Date 5/11/21 Crew DST, JS
Project # 11194450-06
W/L Meter GSH 08644

Well #	Time	W/L	DTB	Measure Pt.
MW-1	0829	10.81	23.35	TOC
MW-2	0910	8.67	24.63	TOR
MW-3	0931	4.64	15.34	TOR
BW-1	0825	13.54	28.92	TOC
BW-2	0904	10.73	27.68	TOC
BW-3	0839	7.24	25.07	TOC
BW-4	0834	7.76	27.07	TOC
BW-5	0845	5.26	28.71	TOC
BW-6	0859	11.47	25.74	TOC
GW-8B	0821	7.14	29.12	TOR
GW-9B	0917	10.89	31.99	TOR
GW-7B	0935	6.79	33.79	TOC
GW-11B	0940	3.86	28.20	TOR

Dave J Tyson



Attachment B

Field Parameters

Attachment B

Groundwater Quality Parameters
Annual Groundwater Monitoring Program
GrafTech International Holdings, Inc.
Niagara Falls, New York
May 2021

Monitoring Well Location	Date	Time (hours:minutes)	Purge Rate (mL/min)	Water Level (ft. BTOR$_f$)	Temperature (°C)	Conductivity (mS/cm)	Turbidity (NTU)	DO (mg/L)	pH (Units)	ORP (mV)
GW-8B	5/11/2021	10:14	108	7.13	9.7	1.56	1.12	3.33	6.97	173.9
		10:19		7.79	9.4	1.56	0.67	3.02	7.09	158.3
		10:24		7.82	9.2	1.57	1.02	2.90	7.10	151.1
		10:29	100		9.5	1.49	0.57	2.29	6.55	146.6
		10:34			9.7	1.58	1.07	1.25	6.17	144.6
		10:39	100	7.88	9.9	1.63	0.79	0.92	5.99	140.4
		10:44	110		9.3	1.67	1.04	0.71	5.92	133.7
		10:49		7.91	9.0	1.67	0.95	0.71	5.93	129.3
		10:54	100		9.6	1.68	0.39	0.54	5.91	123.0
		10:59		7.93	9.5	1.71	1.42	0.43	5.87	118.5
		11:04	104		9.2	1.71	0.92	0.45	5.91	113.6
		11:09			8.8	1.73	0.46	0.46	5.90	108.7
BW-3	5/11/2021	11:31	220	7.23	8.5	1.37	7.91	1.66	5.82	66.0
		11:36		7.24	8.5	1.31	4.87	0.42	5.82	45.5
		11:41	220		8.5	1.19	4.20	0.31	5.84	33.2
		11:46		7.26	8.7	1.14	0.87	0.29	5.85	26.5
		11:51	220		8.5	1.12	1.63	0.26	5.85	23.1
		11:56		7.24	8.6	1.12	0.90	0.18	5.86	20.3
		12:01	220		8.4	1.11	0.31	0.19	5.86	18.0
		12:06			8.6	1.11	0.61	0.17	5.86	15.8
BW-4	5/11/2021	12:33		7.78	9.5	1.03	51.6	5.09	5.87	23.4
		12:38	200		9.6	1.01	65.1	0.89	5.87	6.3
		12:43			10.4	1.03	123	0.34	5.92	-2.0
		12:48	168	7.78	10.6	1.01	17.7	0.23	5.95	-7.4
		12:53		7.78	10.8	1.01	7.51	0.19	5.98	-13.2
		12:58	180		10.2	1.01	8.55	0.17	5.99	-14.6
		13:03			10.1	1.01	6.66	0.17	6.04	-16.7

Notes:

ft. BTOR$_f$ - feet below top of reference elevation
°C - degrees Celsius
mV - millivolts
mg/L - milligrams per liter
NTU - Nephelometric Turbidity Unit
mS/cm - millisiemens per centimeter
mL/min - milliliters per minute
DO - dissolved oxygen
ORP - oxidation-reduction potential

Attachment C

Laboratory Report

eurofins | Environment Testing America

ANALYTICAL REPORT

Eurofins TestAmerica, Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Tel: (716)691-2600

Laboratory Job ID: 480-184508-1
Client Project/Site: 11194450, GrafTech

For:
GHD Services Inc.
2055 Niagara Falls Blvd., Suite 3
Niagara Falls, New York 14304

Attn: Ms. Sue Scrocchi

Denise D Heckler

Authorized for release by:
5/17/2021 10:52:54 AM

Denise Heckler, Project Manager II
(330)966-9477
Denise.Heckler@Eurofinset.com

Table of Contents

Definitions/Glossary

Client: GHD Services Inc.
Project/Site: 11194450, GrafTech

Job ID: 480-184508-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
F2	MS/MSD RPD exceeds control limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: GHD Services Inc.
Project/Site: 11194450, GrafTech

Job ID: 480-184508-1

Job ID: 480-184508-1

Laboratory: Eurofins TestAmerica, Buffalo

Narrative

Job Narrative
480-184508-1

Comments
No additional comments.

Receipt
The samples were received on 5/11/2021 4:00 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 3.0º C.

GC/MS VOA
Method 8260C: The continuing calibration verification (CCV) associated with batch 480-580639 recovered outside acceptance criteria, low biased, for 1,1-Dichloroethene. A reporting limit (RL) standard was analyzed, and the target analyte was detected. Since the associated samples were non-detect for this analyte, the data have been reported.

Method 8260C: The following samples were diluted to bring the concentration of target analytes within the calibration range: WG-11194450-051121-DT-003 (480-184508-4) and WG-11194450-051121-DT-004 (480-184508-5). Elevated reporting limits (RLs) are provided.

Method 8260C: The laboratory control sample (LCS) for analytical batch 480-580903 recovered outside control limits for the following analyte: 1,1,2,2-Tetrachloroethane. This analyte was biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: GHD Services Inc.
Project/Site: 11194450, GrafTech

Job ID: 480-184508-1

Client Sample ID: TB-11194450-051121-DT — Lab Sample ID: 480-184508-1

No Detections.

Client Sample ID: WG-11194450-051121-DT-001 — Lab Sample ID: 480-184508-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2-Dichloroethene, Total	20		2.0	0.81	ug/L	1		8260C	Total/NA
cis-1,2-Dichloroethene	20		1.0	0.81	ug/L	1		8260C	Total/NA
Trichloroethene	3.6		1.0	0.46	ug/L	1		8260C	Total/NA
Vinyl chloride	3.2		1.0	0.90	ug/L	1		8260C	Total/NA

Client Sample ID: WG-11194450-051121-DT-002 — Lab Sample ID: 480-184508-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2-Dichloroethene, Total	2.5		2.0	0.81	ug/L	1		8260C	Total/NA
cis-1,2-Dichloroethene	2.5		1.0	0.81	ug/L	1		8260C	Total/NA
Vinyl chloride	9.1		1.0	0.90	ug/L	1		8260C	Total/NA

Client Sample ID: WG-11194450-051121-DT-003 — Lab Sample ID: 480-184508-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2-Dichloroethene, Total	570		40	16	ug/L	20		8260C	Total/NA
cis-1,2-Dichloroethene	570		20	16	ug/L	20		8260C	Total/NA
Tetrachloroethene	200		20	7.2	ug/L	20		8260C	Total/NA
Trichloroethene	300		20	9.2	ug/L	20		8260C	Total/NA
Vinyl chloride	89		20	18	ug/L	20		8260C	Total/NA

Client Sample ID: WG-11194450-051121-DT-004 — Lab Sample ID: 480-184508-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2-Dichloroethene, Total	480		40	16	ug/L	20		8260C	Total/NA
cis-1,2-Dichloroethene	480		20	16	ug/L	20		8260C	Total/NA
Tetrachloroethene	190		20	7.2	ug/L	20		8260C	Total/NA
Trichloroethene	260		20	9.2	ug/L	20		8260C	Total/NA
Vinyl chloride	72		20	18	ug/L	20		8260C	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: TB-11194450-051121-DT

Trip Blank

Date Collected: 05/11/21 00:00
Date Received: 05/11/21 15:00

Lab Sample ID: 480-184508-1
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			05/13/21 17:10	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			05/13/21 17:10	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			05/13/21 17:10	1
1,1-Dichlorethylene	ND		1.0	0.29	ug/L			05/13/21 17:10	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			05/13/21 17:10	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			05/13/21 17:10	1
1,2-Dichloroethene, Total	ND		2.0	0.81	ug/L			05/13/21 17:10	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			05/13/21 17:10	1
2-Butanone	ND		10	1.3	ug/L			05/13/21 17:10	1
2-Hexanone	ND		5.0	1.2	ug/L			05/13/21 17:10	1
4-Methyl-2-pentanone	ND		5.0	2.1	ug/L			05/13/21 17:10	1
Acetone	ND		10	3.0	ug/L			05/13/21 17:10	1
Benzene	ND		1.0	0.41	ug/L			05/13/21 17:10	1
Bromodichloromethane	ND		1.0	0.39	ug/L			05/13/21 17:10	1
Bromoform	ND		1.0	0.26	ug/L			05/13/21 17:10	1
Bromomethane	ND		1.0	0.69	ug/L			05/13/21 17:10	1
Carbon disulfide	ND		1.0	0.19	ug/L			05/13/21 17:10	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			05/13/21 17:10	1
Chlorobenzene	ND		1.0	0.75	ug/L			05/13/21 17:10	1
Chloroethane	ND		1.0	0.32	ug/L			05/13/21 17:10	1
Chloroform	ND		1.0	0.34	ug/L			05/13/21 17:10	1
Chloromethane	ND		1.0	0.35	ug/L			05/13/21 17:10	1
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			05/13/21 17:10	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			05/13/21 17:10	1
Dibromochloromethane	ND		1.0	0.32	ug/L			05/13/21 17:10	1
Ethylbenzene	ND		1.0	0.74	ug/L			05/13/21 17:10	1
Methylene Chloride	ND		1.0	0.44	ug/L			05/13/21 17:10	1
Styrene	ND		1.0	0.73	ug/L			05/13/21 17:10	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/13/21 17:10	1
Toluene	ND		1.0	0.51	ug/L			05/13/21 17:10	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/13/21 17:10	1
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			05/13/21 17:10	1
Trichloroethene	ND		1.0	0.46	ug/L			05/13/21 17:10	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/13/21 17:10	1
Xylenes, Total	ND		2.0	0.66	ug/L			05/13/21 17:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*89*		*77 - 120*		*05/13/21 17:10*	*1*
4-Bromofluorobenzene (Surr)	*94*		*73 - 120*		*05/13/21 17:10*	*1*
Dibromofluoromethane (Surr)	*95*		*75 - 123*		*05/13/21 17:10*	*1*
Toluene-d8 (Surr)	*88*		*80 - 120*		*05/13/21 17:10*	*1*

Client Sample ID: WG-11194450-051121-DT-001

GW-8B

Date Collected: 05/11/21 11:15
Date Received: 05/11/21 15:00

Lab Sample ID: 480-184508-2
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			05/13/21 17:33	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			05/13/21 17:33	1

Client Sample ID: WG-11194450-051121-DT-001

Lab Sample ID: 480-184508-2

Date Collected: 05/11/21 11:15

Matrix: Water

Date Received: 05/11/21 15:00

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			05/13/21 17:33	1
1,1-Dichlorethylene	ND		1.0	0.29	ug/L			05/13/21 17:33	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			05/13/21 17:33	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			05/13/21 17:33	1
1,2-Dichloroethene, Total	**20**		2.0	0.81	ug/L			05/13/21 17:33	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			05/13/21 17:33	1
2-Butanone	ND		10	1.3	ug/L			05/13/21 17:33	1
2-Hexanone	ND		5.0	1.2	ug/L			05/13/21 17:33	1
4-Methyl-2-pentanone	ND		5.0	2.1	ug/L			05/13/21 17:33	1
Acetone	ND		10	3.0	ug/L			05/13/21 17:33	1
Benzene	ND		1.0	0.41	ug/L			05/13/21 17:33	1
Bromodichloromethane	ND		1.0	0.39	ug/L			05/13/21 17:33	1
Bromoform	ND		1.0	0.26	ug/L			05/13/21 17:33	1
Bromomethane	ND		1.0	0.69	ug/L			05/13/21 17:33	1
Carbon disulfide	ND		1.0	0.19	ug/L			05/13/21 17:33	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			05/13/21 17:33	1
Chlorobenzene	ND		1.0	0.75	ug/L			05/13/21 17:33	1
Chloroethane	ND		1.0	0.32	ug/L			05/13/21 17:33	1
Chloroform	ND		1.0	0.34	ug/L			05/13/21 17:33	1
Chloromethane	ND		1.0	0.35	ug/L			05/13/21 17:33	1
cis-1,2-Dichloroethene	**20**		1.0	0.81	ug/L			05/13/21 17:33	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			05/13/21 17:33	1
Dibromochloromethane	ND		1.0	0.32	ug/L			05/13/21 17:33	1
Ethylbenzene	ND		1.0	0.74	ug/L			05/13/21 17:33	1
Methylene Chloride	ND		1.0	0.44	ug/L			05/13/21 17:33	1
Styrene	ND		1.0	0.73	ug/L			05/13/21 17:33	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/13/21 17:33	1
Toluene	ND		1.0	0.51	ug/L			05/13/21 17:33	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/13/21 17:33	1
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			05/13/21 17:33	1
Trichloroethene	**3.6**		1.0	0.46	ug/L			05/13/21 17:33	1
Vinyl chloride	**3.2**		1.0	0.90	ug/L			05/13/21 17:33	1
Xylenes, Total	ND		2.0	0.66	ug/L			05/13/21 17:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*89*		*77 - 120*		*05/13/21 17:33*	*1*
4-Bromofluorobenzene (Surr)	*103*		*73 - 120*		*05/13/21 17:33*	*1*
Dibromofluoromethane (Surr)	*95*		*75 - 123*		*05/13/21 17:33*	*1*
Toluene-d8 (Surr)	*95*		*80 - 120*		*05/13/21 17:33*	*1*

Client Sample ID: WG-11194450-051121-DT-002

BW-3

Lab Sample ID: 480-184508-3

Date Collected: 05/11/21 12:10

Matrix: Water

Date Received: 05/11/21 15:00

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND	F2	1.0	0.82	ug/L			05/13/21 17:56	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			05/13/21 17:56	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			05/13/21 17:56	1
1,1-Dichlorethylene	ND		1.0	0.29	ug/L			05/13/21 17:56	1

Client: GHD Services Inc.
Project/Site: 11194450, GrafTech

Job ID: 480-184508-1

Client Sample ID: WG-11194450-051121-DT-002

Date Collected: 05/11/21 12:10
Date Received: 05/11/21 15:00

Lab Sample ID: 480-184508-3
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethane	ND		1.0	0.38	ug/L			05/13/21 17:56	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			05/13/21 17:56	1
1,2-Dichloroethene, Total	**2.5**		2.0	0.81	ug/L			05/13/21 17:56	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			05/13/21 17:56	1
2-Butanone	ND		10	1.3	ug/L			05/13/21 17:56	1
2-Hexanone	ND		5.0	1.2	ug/L			05/13/21 17:56	1
4-Methyl-2-pentanone	ND		5.0	2.1	ug/L			05/13/21 17:56	1
Acetone	ND		10	3.0	ug/L			05/13/21 17:56	1
Benzene	ND		1.0	0.41	ug/L			05/13/21 17:56	1
Bromodichloromethane	ND		1.0	0.39	ug/L			05/13/21 17:56	1
Bromoform	ND		1.0	0.26	ug/L			05/13/21 17:56	1
Bromomethane	ND		1.0	0.69	ug/L			05/13/21 17:56	1
Carbon disulfide	ND		1.0	0.19	ug/L			05/13/21 17:56	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			05/13/21 17:56	1
Chlorobenzene	ND		1.0	0.75	ug/L			05/13/21 17:56	1
Chloroethane	ND		1.0	0.32	ug/L			05/13/21 17:56	1
Chloroform	ND		1.0	0.34	ug/L			05/13/21 17:56	1
Chloromethane	ND		1.0	0.35	ug/L			05/13/21 17:56	1
cis-1,2-Dichloroethene	**2.5**		1.0	0.81	ug/L			05/13/21 17:56	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			05/13/21 17:56	1
Dibromochloromethane	ND		1.0	0.32	ug/L			05/13/21 17:56	1
Ethylbenzene	ND		1.0	0.74	ug/L			05/13/21 17:56	1
Methylene Chloride	ND		1.0	0.44	ug/L			05/13/21 17:56	1
Styrene	ND		1.0	0.73	ug/L			05/13/21 17:56	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/13/21 17:56	1
Toluene	ND		1.0	0.51	ug/L			05/13/21 17:56	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/13/21 17:56	1
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			05/13/21 17:56	1
Trichloroethene	ND		1.0	0.46	ug/L			05/13/21 17:56	1
Vinyl chloride	**9.1**		1.0	0.90	ug/L			05/13/21 17:56	1
Xylenes, Total	ND		2.0	0.66	ug/L			05/13/21 17:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*86*		*77 - 120*		*05/13/21 17:56*	*1*
4-Bromofluorobenzene (Surr)	*93*		*73 - 120*		*05/13/21 17:56*	*1*
Dibromofluoromethane (Surr)	*90*		*75 - 123*		*05/13/21 17:56*	*1*
Toluene-d8 (Surr)	*85*		*80 - 120*		*05/13/21 17:56*	*1*

Client Sample ID: WG-11194450-051121-DT-003

Date Collected: 05/11/21 13:05
Date Received: 05/11/21 15:00

BW-4

Lab Sample ID: 480-184508-4
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		20	16	ug/L			05/14/21 11:01	20
1,1,2,2-Tetrachloroethane	ND	*+	20	4.2	ug/L			05/14/21 11:01	20
1,1,2-Trichloroethane	ND		20	4.6	ug/L			05/14/21 11:01	20
1,1-Dichlorethylene	ND		20	5.8	ug/L			05/14/21 11:01	20
1,1-Dichloroethane	ND		20	7.6	ug/L			05/14/21 11:01	20
1,2-Dichloroethane	ND		20	4.2	ug/L			05/14/21 11:01	20

Client Sample ID: WG-11194450-051121-DT-003

Lab Sample ID: 480-184508-4

Date Collected: 05/11/21 13:05
Date Received: 05/11/21 15:00

Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloroethene, Total	**570**		40	16	ug/L			05/14/21 11:01	20
1,2-Dichloropropane	ND		20	14	ug/L			05/14/21 11:01	20
2-Butanone	ND		200	26	ug/L			05/14/21 11:01	20
2-Hexanone	ND		100	25	ug/L			05/14/21 11:01	20
4-Methyl-2-pentanone	ND		100	42	ug/L			05/14/21 11:01	20
Acetone	ND		200	60	ug/L			05/14/21 11:01	20
Benzene	ND		20	8.2	ug/L			05/14/21 11:01	20
Bromodichloromethane	ND		20	7.8	ug/L			05/14/21 11:01	20
Bromoform	ND		20	5.2	ug/L			05/14/21 11:01	20
Bromomethane	ND		20	14	ug/L			05/14/21 11:01	20
Carbon disulfide	ND		20	3.8	ug/L			05/14/21 11:01	20
Carbon tetrachloride	ND		20	5.4	ug/L			05/14/21 11:01	20
Chlorobenzene	ND		20	15	ug/L			05/14/21 11:01	20
Chloroethane	ND		20	6.4	ug/L			05/14/21 11:01	20
Chloroform	ND		20	6.8	ug/L			05/14/21 11:01	20
Chloromethane	ND		20	7.0	ug/L			05/14/21 11:01	20
cis-1,2-Dichloroethene	**570**		20	16	ug/L			05/14/21 11:01	20
cis-1,3-Dichloropropene	ND		20	7.2	ug/L			05/14/21 11:01	20
Dibromochloromethane	ND		20	6.4	ug/L			05/14/21 11:01	20
Ethylbenzene	ND		20	15	ug/L			05/14/21 11:01	20
Methylene Chloride	ND		20	8.8	ug/L			05/14/21 11:01	20
Styrene	ND		20	15	ug/L			05/14/21 11:01	20
Tetrachloroethene	**200**		20	7.2	ug/L			05/14/21 11:01	20
Toluene	ND		20	10	ug/L			05/14/21 11:01	20
trans-1,2-Dichloroethene	ND		20	18	ug/L			05/14/21 11:01	20
trans-1,3-Dichloropropene	ND		20	7.4	ug/L			05/14/21 11:01	20
Trichloroethene	**300**		20	9.2	ug/L			05/14/21 11:01	20
Vinyl chloride	**89**		20	18	ug/L			05/14/21 11:01	20
Xylenes, Total	ND		40	13	ug/L			05/14/21 11:01	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*94*		*77 - 120*		*05/14/21 11:01*	*20*
4-Bromofluorobenzene (Surr)	*93*		*73 - 120*		*05/14/21 11:01*	*20*
Dibromofluoromethane (Surr)	*97*		*75 - 123*		*05/14/21 11:01*	*20*
Toluene-d8 (Surr)	*88*		*80 - 120*		*05/14/21 11:01*	*20*

Client Sample ID: WG-11194450-051121-DT-004

BW-4 dup

Lab Sample ID: 480-184508-5

Date Collected: 05/11/21 13:05
Date Received: 05/11/21 15:00

Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		20	16	ug/L			05/14/21 11:24	20
1,1,2,2-Tetrachloroethane	ND	*+	20	4.2	ug/L			05/14/21 11:24	20
1,1,2-Trichloroethane	ND		20	4.6	ug/L			05/14/21 11:24	20
1,1-Dichlorethylene	ND		20	5.8	ug/L			05/14/21 11:24	20
1,1-Dichloroethane	ND		20	7.6	ug/L			05/14/21 11:24	20
1,2-Dichloroethane	ND		20	4.2	ug/L			05/14/21 11:24	20
1,2-Dichloroethene, Total	**480**		40	16	ug/L			05/14/21 11:24	20
1,2-Dichloropropane	ND		20	14	ug/L			05/14/21 11:24	20

Client: GHD Services Inc.
Project/Site: 11194450, GrafTech

Job ID: 480-184508-1

Client Sample ID: WG-11194450-051121-DT-004
Date Collected: 05/11/21 13:05
Date Received: 05/11/21 15:00

Lab Sample ID: 480-184508-5
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Butanone	ND		200	26	ug/L			05/14/21 11:24	20
2-Hexanone	ND		100	25	ug/L			05/14/21 11:24	20
4-Methyl-2-pentanone	ND		100	42	ug/L			05/14/21 11:24	20
Acetone	ND		200	60	ug/L			05/14/21 11:24	20
Benzene	ND		20	8.2	ug/L			05/14/21 11:24	20
Bromodichloromethane	ND		20	7.8	ug/L			05/14/21 11:24	20
Bromoform	ND		20	5.2	ug/L			05/14/21 11:24	20
Bromomethane	ND		20	14	ug/L			05/14/21 11:24	20
Carbon disulfide	ND		20	3.8	ug/L			05/14/21 11:24	20
Carbon tetrachloride	ND		20	5.4	ug/L			05/14/21 11:24	20
Chlorobenzene	ND		20	15	ug/L			05/14/21 11:24	20
Chloroethane	ND		20	6.4	ug/L			05/14/21 11:24	20
Chloroform	ND		20	6.8	ug/L			05/14/21 11:24	20
Chloromethane	ND		20	7.0	ug/L			05/14/21 11:24	20
cis-1,2-Dichloroethene	**480**		20	16	ug/L			05/14/21 11:24	20
cis-1,3-Dichloropropene	ND		20	7.2	ug/L			05/14/21 11:24	20
Dibromochloromethane	ND		20	6.4	ug/L			05/14/21 11:24	20
Ethylbenzene	ND		20	15	ug/L			05/14/21 11:24	20
Methylene Chloride	ND		20	8.8	ug/L			05/14/21 11:24	20
Styrene	ND		20	15	ug/L			05/14/21 11:24	20
Tetrachloroethene	**190**		20	7.2	ug/L			05/14/21 11:24	20
Toluene	ND		20	10	ug/L			05/14/21 11:24	20
trans-1,2-Dichloroethene	ND		20	18	ug/L			05/14/21 11:24	20
trans-1,3-Dichloropropene	ND		20	7.4	ug/L			05/14/21 11:24	20
Trichloroethene	**260**		20	9.2	ug/L			05/14/21 11:24	20
Vinyl chloride	**72**		20	18	ug/L			05/14/21 11:24	20
Xylenes, Total	ND		40	13	ug/L			05/14/21 11:24	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*90*		*77 - 120*		*05/14/21 11:24*	*20*
4-Bromofluorobenzene (Surr)	*92*		*73 - 120*		*05/14/21 11:24*	*20*
Dibromofluoromethane (Surr)	*89*		*75 - 123*		*05/14/21 11:24*	*20*
Toluene-d8 (Surr)	*87*		*80 - 120*		*05/14/21 11:24*	*20*

Surrogate Summary

Client: GHD Services Inc.
Project/Site: 11194450, GrafTech

Job ID: 480-184508-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(77-120)	(73-120)	(75-123)	(80-120)
480-184508-1	TB-11194450-051121-DT	89	94	95	88
480-184508-2	WG-11194450-051121-DT-001	89	103	95	95
480-184508-3	WG-11194450-051121-DT-002	86	93	90	85
480-184508-3 MS	WG-11194450-051121-DT-002	85	92	82	92
480-184508-3 MSD	WG-11194450-051121-DT-002	86	90	93	88
480-184508-4	WG-11194450-051121-DT-003	94	93	97	88
480-184508-5	WG-11194450-051121-DT-004	90	92	89	87
LCS 480-580639/5	Lab Control Sample	89	89	87	89
LCS 480-580903/5	Lab Control Sample	88	95	87	91
MB 480-580639/7	Method Blank	88	93	91	93
MB 480-580903/7	Method Blank	89	90	92	88

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 480-580639/7
Matrix: Water
Analysis Batch: 580639

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			05/13/21 10:28	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			05/13/21 10:28	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			05/13/21 10:28	1
1,1-Dichlorethylene	ND		1.0	0.29	ug/L			05/13/21 10:28	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			05/13/21 10:28	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			05/13/21 10:28	1
1,2-Dichloroethene, Total	ND		2.0	0.81	ug/L			05/13/21 10:28	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			05/13/21 10:28	1
2-Butanone	ND		10	1.3	ug/L			05/13/21 10:28	1
2-Hexanone	ND		5.0	1.2	ug/L			05/13/21 10:28	1
4-Methyl-2-pentanone	ND		5.0	2.1	ug/L			05/13/21 10:28	1
Acetone	ND		10	3.0	ug/L			05/13/21 10:28	1
Benzene	ND		1.0	0.41	ug/L			05/13/21 10:28	1
Bromodichloromethane	ND		1.0	0.39	ug/L			05/13/21 10:28	1
Bromoform	ND		1.0	0.26	ug/L			05/13/21 10:28	1
Bromomethane	ND		1.0	0.69	ug/L			05/13/21 10:28	1
Carbon disulfide	ND		1.0	0.19	ug/L			05/13/21 10:28	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			05/13/21 10:28	1
Chlorobenzene	ND		1.0	0.75	ug/L			05/13/21 10:28	1
Chloroethane	ND		1.0	0.32	ug/L			05/13/21 10:28	1
Chloroform	ND		1.0	0.34	ug/L			05/13/21 10:28	1
Chloromethane	ND		1.0	0.35	ug/L			05/13/21 10:28	1
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			05/13/21 10:28	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			05/13/21 10:28	1
Dibromochloromethane	ND		1.0	0.32	ug/L			05/13/21 10:28	1
Ethylbenzene	ND		1.0	0.74	ug/L			05/13/21 10:28	1
Methylene Chloride	ND		1.0	0.44	ug/L			05/13/21 10:28	1
Styrene	ND		1.0	0.73	ug/L			05/13/21 10:28	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/13/21 10:28	1
Toluene	ND		1.0	0.51	ug/L			05/13/21 10:28	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/13/21 10:28	1
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			05/13/21 10:28	1
Trichloroethene	ND		1.0	0.46	ug/L			05/13/21 10:28	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/13/21 10:28	1
Xylenes, Total	ND		2.0	0.66	ug/L			05/13/21 10:28	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*88*		*77 - 120*		*05/13/21 10:28*	*1*
4-Bromofluorobenzene (Surr)	*93*		*73 - 120*		*05/13/21 10:28*	*1*
Dibromofluoromethane (Surr)	*91*		*75 - 123*		*05/13/21 10:28*	*1*
Toluene-d8 (Surr)	*93*		*80 - 120*		*05/13/21 10:28*	*1*

Lab Sample ID: LCS 480-580639/5
Matrix: Water
Analysis Batch: 580639

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,1,1-Trichloroethane			25.0	20.3		ug/L		81	73 - 126		

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 480-580639/5
Matrix: Water
Analysis Batch: 580639

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,2,2-Tetrachloroethane	25.0	28.1		ug/L		112	76 - 120
1,1,2-Trichloroethane	25.0	25.6		ug/L		102	76 - 122
1,1-Dichlorethylene	25.0	18.9		ug/L		76	66 - 127
1,1-Dichloroethane	25.0	21.3		ug/L		85	77 - 120
1,2-Dichloroethane	25.0	23.6		ug/L		94	75 - 120
1,2-Dichloroethene, Total	50.0	43.1		ug/L		86	72 - 124
1,2-Dichloropropane	25.0	23.6		ug/L		95	76 - 120
2-Butanone	125	128		ug/L		102	57 - 140
2-Hexanone	125	126		ug/L		101	65 - 127
4-Methyl-2-pentanone	125	125		ug/L		100	71 - 125
Acetone	125	128		ug/L		102	56 - 142
Benzene	25.0	22.5		ug/L		90	71 - 124
Bromodichloromethane	25.0	24.3		ug/L		97	80 - 122
Bromoform	25.0	24.7		ug/L		99	61 - 132
Bromomethane	25.0	16.7		ug/L		67	55 - 144
Carbon disulfide	25.0	19.5		ug/L		78	59 - 134
Carbon tetrachloride	25.0	20.6		ug/L		82	72 - 134
Chlorobenzene	25.0	24.2		ug/L		97	80 - 120
Chloroethane	25.0	21.3		ug/L		85	69 - 136
Chloroform	25.0	20.7		ug/L		83	73 - 127
Chloromethane	25.0	22.6		ug/L		90	68 - 124
cis-1,2-Dichloroethene	25.0	22.4		ug/L		90	74 - 124
cis-1,3-Dichloropropene	25.0	26.1		ug/L		104	74 - 124
Dibromochloromethane	25.0	27.7		ug/L		111	75 - 125
Ethylbenzene	25.0	22.4		ug/L		90	77 - 123
Methylene Chloride	25.0	21.6		ug/L		86	75 - 124
Styrene	25.0	24.2		ug/L		97	80 - 120
Tetrachloroethene	25.0	21.9		ug/L		88	74 - 122
Toluene	25.0	23.0		ug/L		92	80 - 122
trans-1,2-Dichloroethene	25.0	20.7		ug/L		83	73 - 127
trans-1,3-Dichloropropene	25.0	27.6		ug/L		110	80 - 120
Trichloroethene	25.0	21.0		ug/L		84	74 - 123
Vinyl chloride	25.0	17.8		ug/L		71	65 - 133
Xylenes, Total	50.0	45.9		ug/L		92	76 - 122

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*89*		*77 - 120*
4-Bromofluorobenzene (Surr)	*89*		*73 - 120*
Dibromofluoromethane (Surr)	*87*		*75 - 123*
Toluene-d8 (Surr)	*89*		*80 - 120*

Lab Sample ID: 480-184508-3 MS
Matrix: Water
Analysis Batch: 580639

Client Sample ID: WG-11194450-051121-DT-002
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	ND	F2	25.0	22.4		ug/L		90	73 - 126
1,1,2,2-Tetrachloroethane	ND		25.0	25.9		ug/L		104	76 - 120

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 480-184508-3 MS
Matrix: Water
Analysis Batch: 580639

Client Sample ID: WG-11194450-051121-DT-002
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,2-Trichloroethane	ND		25.0	25.7		ug/L		103	76 - 122
1,1-Dichlorethylene	ND		25.0	21.8		ug/L		87	66 - 127
1,1-Dichloroethane	ND		25.0	22.2		ug/L		89	77 - 120
1,2-Dichloroethane	ND		25.0	22.0		ug/L		88	75 - 120
1,2-Dichloroethene, Total	2.5		50.0	45.6		ug/L		86	72 - 124
1,2-Dichloropropane	ND		25.0	25.8		ug/L		103	76 - 120
2-Butanone	ND		125	98.9		ug/L		79	57 - 140
2-Hexanone	ND		125	114		ug/L		91	65 - 127
4-Methyl-2-pentanone	ND		125	116		ug/L		93	71 - 125
Acetone	ND		125	84.8		ug/L		68	56 - 142
Benzene	ND		25.0	23.1		ug/L		92	71 - 124
Bromodichloromethane	ND		25.0	26.7		ug/L		107	80 - 122
Bromoform	ND		25.0	21.5		ug/L		86	61 - 132
Bromomethane	ND		25.0	27.2		ug/L		109	55 - 144
Carbon disulfide	ND		25.0	22.8		ug/L		91	59 - 134
Carbon tetrachloride	ND		25.0	24.1		ug/L		96	72 - 134
Chlorobenzene	ND		25.0	25.3		ug/L		101	80 - 120
Chloroethane	ND		25.0	26.6		ug/L		106	69 - 136
Chloroform	ND		25.0	20.7		ug/L		83	73 - 127
Chloromethane	ND		25.0	25.4		ug/L		101	68 - 124
cis-1,2-Dichloroethene	2.5		25.0	24.1		ug/L		86	74 - 124
cis-1,3-Dichloropropene	ND		25.0	26.7		ug/L		107	74 - 124
Dibromochloromethane	ND		25.0	25.6		ug/L		102	75 - 125
Ethylbenzene	ND		25.0	25.4		ug/L		102	77 - 123
Methylene Chloride	ND		25.0	21.8		ug/L		87	75 - 124
Styrene	ND		25.0	25.8		ug/L		103	80 - 120
Tetrachloroethene	ND		25.0	26.3		ug/L		105	74 - 122
Toluene	ND		25.0	26.1		ug/L		104	80 - 122
trans-1,2-Dichloroethene	ND		25.0	21.5		ug/L		86	73 - 127
trans-1,3-Dichloropropene	ND		25.0	25.7		ug/L		103	80 - 120
Trichloroethene	ND		25.0	22.1		ug/L		89	74 - 123
Vinyl chloride	9.1		25.0	34.5		ug/L		101	65 - 133
Xylenes, Total	ND		50.0	50.4		ug/L		101	76 - 122

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*85*		*77 - 120*
4-Bromofluorobenzene (Surr)	*92*		*73 - 120*
Dibromofluoromethane (Surr)	*82*		*75 - 123*
Toluene-d8 (Surr)	*92*		*80 - 120*

Lab Sample ID: 480-184508-3 MSD
Matrix: Water
Analysis Batch: 580639

Client Sample ID: WG-11194450-051121-DT-002
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1-Trichloroethane	ND	F2	25.0	26.4	F2	ug/L		105	73 - 126	16	15
1,1,2,2-Tetrachloroethane	ND		25.0	24.4		ug/L		97	76 - 120	6	15
1,1,2-Trichloroethane	ND		25.0	23.3		ug/L		93	76 - 122	10	15

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 480-184508-3 MSD
Matrix: Water
Analysis Batch: 580639

Client Sample ID: WG-11194450-051121-DT-002
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1-Dichlorethylene	ND		25.0	23.5		ug/L		94	66 - 127	7	16
1,1-Dichloroethane	ND		25.0	24.6		ug/L		98	77 - 120	10	20
1,2-Dichloroethane	ND		25.0	21.7		ug/L		87	75 - 120	1	20
1,2-Dichloroethene, Total	2.5		50.0	50.4		ug/L		96	72 - 124	10	20
1,2-Dichloropropane	ND		25.0	23.8		ug/L		95	76 - 120	8	20
2-Butanone	ND		125	88.4		ug/L		71	57 - 140	11	20
2-Hexanone	ND		125	114		ug/L		91	65 - 127	0	15
4-Methyl-2-pentanone	ND		125	103		ug/L		82	71 - 125	12	35
Acetone	ND		125	75.9		ug/L		61	56 - 142	11	15
Benzene	ND		25.0	23.9		ug/L		96	71 - 124	4	13
Bromodichloromethane	ND		25.0	23.5		ug/L		94	80 - 122	13	15
Bromoform	ND		25.0	22.0		ug/L		88	61 - 132	3	15
Bromomethane	ND		25.0	28.9		ug/L		116	55 - 144	6	15
Carbon disulfide	ND		25.0	24.1		ug/L		96	59 - 134	6	15
Carbon tetrachloride	ND		25.0	26.8		ug/L		107	72 - 134	11	15
Chlorobenzene	ND		25.0	24.2		ug/L		97	80 - 120	4	25
Chloroethane	ND		25.0	27.2		ug/L		109	69 - 136	2	15
Chloroform	ND		25.0	22.5		ug/L		90	73 - 127	8	20
Chloromethane	ND		25.0	22.5		ug/L		90	68 - 124	12	15
cis-1,2-Dichloroethene	2.5		25.0	26.2		ug/L		95	74 - 124	8	15
cis-1,3-Dichloropropene	ND		25.0	23.0		ug/L		92	74 - 124	15	15
Dibromochloromethane	ND		25.0	23.6		ug/L		95	75 - 125	8	15
Ethylbenzene	ND		25.0	24.5		ug/L		98	77 - 123	3	15
Methylene Chloride	ND		25.0	22.9		ug/L		91	75 - 124	5	15
Styrene	ND		25.0	24.7		ug/L		99	80 - 120	4	20
Tetrachloroethene	ND		25.0	24.4		ug/L		98	74 - 122	7	20
Toluene	ND		25.0	23.5		ug/L		94	80 - 122	10	15
trans-1,2-Dichloroethene	ND		25.0	24.2		ug/L		97	73 - 127	12	20
trans-1,3-Dichloropropene	ND		25.0	23.0		ug/L		92	80 - 120	11	15
Trichloroethene	ND		25.0	21.7		ug/L		87	74 - 123	2	16
Vinyl chloride	9.1		25.0	33.6		ug/L		98	65 - 133	3	15
Xylenes, Total	ND		50.0	49.1		ug/L		98	76 - 122	3	16

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*86*		*77 - 120*
4-Bromofluorobenzene (Surr)	*90*		*73 - 120*
Dibromofluoromethane (Surr)	*93*		*75 - 123*
Toluene-d8 (Surr)	*88*		*80 - 120*

Lab Sample ID: MB 480-580903/7
Matrix: Water
Analysis Batch: 580903

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			05/14/21 10:25	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			05/14/21 10:25	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			05/14/21 10:25	1
1,1-Dichlorethylene	ND		1.0	0.29	ug/L			05/14/21 10:25	1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 480-580903/7
Matrix: Water
Analysis Batch: 580903

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethane	ND		1.0	0.38	ug/L			05/14/21 10:25	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			05/14/21 10:25	1
1,2-Dichloroethene, Total	ND		2.0	0.81	ug/L			05/14/21 10:25	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			05/14/21 10:25	1
2-Butanone	ND		10	1.3	ug/L			05/14/21 10:25	1
2-Hexanone	ND		5.0	1.2	ug/L			05/14/21 10:25	1
4-Methyl-2-pentanone	ND		5.0	2.1	ug/L			05/14/21 10:25	1
Acetone	ND		10	3.0	ug/L			05/14/21 10:25	1
Benzene	ND		1.0	0.41	ug/L			05/14/21 10:25	1
Bromodichloromethane	ND		1.0	0.39	ug/L			05/14/21 10:25	1
Bromoform	ND		1.0	0.26	ug/L			05/14/21 10:25	1
Bromomethane	ND		1.0	0.69	ug/L			05/14/21 10:25	1
Carbon disulfide	ND		1.0	0.19	ug/L			05/14/21 10:25	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			05/14/21 10:25	1
Chlorobenzene	ND		1.0	0.75	ug/L			05/14/21 10:25	1
Chloroethane	ND		1.0	0.32	ug/L			05/14/21 10:25	1
Chloroform	ND		1.0	0.34	ug/L			05/14/21 10:25	1
Chloromethane	ND		1.0	0.35	ug/L			05/14/21 10:25	1
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			05/14/21 10:25	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			05/14/21 10:25	1
Dibromochloromethane	ND		1.0	0.32	ug/L			05/14/21 10:25	1
Ethylbenzene	ND		1.0	0.74	ug/L			05/14/21 10:25	1
Methylene Chloride	ND		1.0	0.44	ug/L			05/14/21 10:25	1
Styrene	ND		1.0	0.73	ug/L			05/14/21 10:25	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/14/21 10:25	1
Toluene	ND		1.0	0.51	ug/L			05/14/21 10:25	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/14/21 10:25	1
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			05/14/21 10:25	1
Trichloroethene	ND		1.0	0.46	ug/L			05/14/21 10:25	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/14/21 10:25	1
Xylenes, Total	ND		2.0	0.66	ug/L			05/14/21 10:25	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*89*		*77 - 120*		*05/14/21 10:25*	*1*
4-Bromofluorobenzene (Surr)	*90*		*73 - 120*		*05/14/21 10:25*	*1*
Dibromofluoromethane (Surr)	*92*		*75 - 123*		*05/14/21 10:25*	*1*
Toluene-d8 (Surr)	*88*		*80 - 120*		*05/14/21 10:25*	*1*

Lab Sample ID: LCS 480-580903/5
Matrix: Water
Analysis Batch: 580903

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	25.0	22.8		ug/L		91	73 - 126
1,1,2,2-Tetrachloroethane	25.0	30.7	*+	ug/L		123	76 - 120
1,1,2-Trichloroethane	25.0	26.4		ug/L		106	76 - 122
1,1-Dichlorethylene	25.0	20.1		ug/L		81	66 - 127
1,1-Dichloroethane	25.0	22.6		ug/L		90	77 - 120

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 480-580903/5
Matrix: Water
Analysis Batch: 580903

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichloroethane	25.0	24.4		ug/L		98	75 - 120
1,2-Dichloroethene, Total	50.0	43.4		ug/L		87	72 - 124
1,2-Dichloropropane	25.0	24.4		ug/L		98	76 - 120
2-Butanone	125	142		ug/L		113	57 - 140
2-Hexanone	125	146		ug/L		117	65 - 127
4-Methyl-2-pentanone	125	135		ug/L		108	71 - 125
Acetone	125	145		ug/L		116	56 - 142
Benzene	25.0	23.6		ug/L		94	71 - 124
Bromodichloromethane	25.0	26.0		ug/L		104	80 - 122
Bromoform	25.0	25.7		ug/L		103	61 - 132
Bromomethane	25.0	20.4		ug/L		81	55 - 144
Carbon disulfide	25.0	21.1		ug/L		84	59 - 134
Carbon tetrachloride	25.0	23.4		ug/L		94	72 - 134
Chlorobenzene	25.0	25.5		ug/L		102	80 - 120
Chloroethane	25.0	20.0		ug/L		80	69 - 136
Chloroform	25.0	21.5		ug/L		86	73 - 127
Chloromethane	25.0	22.4		ug/L		89	68 - 124
cis-1,2-Dichloroethene	25.0	22.1		ug/L		88	74 - 124
cis-1,3-Dichloropropene	25.0	26.8		ug/L		107	74 - 124
Dibromochloromethane	25.0	27.8		ug/L		111	75 - 125
Ethylbenzene	25.0	24.6		ug/L		98	77 - 123
Methylene Chloride	25.0	21.5		ug/L		86	75 - 124
Styrene	25.0	25.8		ug/L		103	80 - 120
Tetrachloroethene	25.0	24.9		ug/L		100	74 - 122
Toluene	25.0	24.6		ug/L		98	80 - 122
trans-1,2-Dichloroethene	25.0	21.3		ug/L		85	73 - 127
trans-1,3-Dichloropropene	25.0	29.4		ug/L		118	80 - 120
Trichloroethene	25.0	22.1		ug/L		88	74 - 123
Vinyl chloride	25.0	20.6		ug/L		82	65 - 133
Xylenes, Total	50.0	49.8		ug/L		100	76 - 122

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*88*		*77 - 120*
4-Bromofluorobenzene (Surr)	*95*		*73 - 120*
Dibromofluoromethane (Surr)	*87*		*75 - 123*
Toluene-d8 (Surr)	*91*		*80 - 120*

QC Association Summary

Client: GHD Services Inc.
Project/Site: 11194450, GrafTech

Job ID: 480-184508-1

GC/MS VOA

Analysis Batch: 580639

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-184508-1	TB-11194450-051121-DT	Total/NA	Water	8260C	
480-184508-2	WG-11194450-051121-DT-001	Total/NA	Water	8260C	
480-184508-3	WG-11194450-051121-DT-002	Total/NA	Water	8260C	
MB 480-580639/7	Method Blank	Total/NA	Water	8260C	
LCS 480-580639/5	Lab Control Sample	Total/NA	Water	8260C	
480-184508-3 MS	WG-11194450-051121-DT-002	Total/NA	Water	8260C	
480-184508-3 MSD	WG-11194450-051121-DT-002	Total/NA	Water	8260C	

Analysis Batch: 580903

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-184508-4	WG-11194450-051121-DT-003	Total/NA	Water	8260C	
480-184508-5	WG-11194450-051121-DT-004	Total/NA	Water	8260C	
MB 480-580903/7	Method Blank	Total/NA	Water	8260C	
LCS 480-580903/5	Lab Control Sample	Total/NA	Water	8260C	

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 11194450, GrafTech

Job ID: 480-184508-1

Client Sample ID: TB-11194450-051121-DT
Lab Sample ID: 480-184508-1
Date Collected: 05/11/21 00:00
Matrix: Water
Date Received: 05/11/21 15:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	580639	05/13/21 17:10	CRL	TAL BUF

Client Sample ID: WG-11194450-051121-DT-001
Lab Sample ID: 480-184508-2
Date Collected: 05/11/21 11:15
Matrix: Water
Date Received: 05/11/21 15:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	580639	05/13/21 17:33	CRL	TAL BUF

Client Sample ID: WG-11194450-051121-DT-002
Lab Sample ID: 480-184508-3
Date Collected: 05/11/21 12:10
Matrix: Water
Date Received: 05/11/21 15:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	580639	05/13/21 17:56	CRL	TAL BUF

Client Sample ID: WG-11194450-051121-DT-003
Lab Sample ID: 480-184508-4
Date Collected: 05/11/21 13:05
Matrix: Water
Date Received: 05/11/21 15:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		20	580903	05/14/21 11:01	OMI	TAL BUF

Client Sample ID: WG-11194450-051121-DT-004
Lab Sample ID: 480-184508-5
Date Collected: 05/11/21 13:05
Matrix: Water
Date Received: 05/11/21 15:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		20	580903	05/14/21 11:24	OMI	TAL BUF

Laboratory References:

TAL BUF = Eurofins TestAmerica, Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

Accreditation/Certification Summary

Client: GHD Services Inc.
Job ID: 480-184508-1
Project/Site: 11194450, GrafTech

Laboratory: Eurofins TestAmerica, Buffalo

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
New York	NELAP	10026	04-01-22

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8260C		Water	1,2-Dichloroethene, Total

Method Summary

Client: GHD Services Inc.
Project/Site: 11194450, GrafTech

Job ID: 480-184508-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL BUF
5030C	Purge and Trap	SW846	TAL BUF

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL BUF = Eurofins TestAmerica, Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

Sample Summary

Client: GHD Services Inc.
Project/Site: 11194450, GrafTech

Job ID: 480-184508-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
480-184508-1	TB-11194450-051121-DT	Water	05/11/21 00:00	05/11/21 15:00	
480-184508-2	WG-11194450-051121-DT-001	Water	05/11/21 11:15	05/11/21 15:00	
480-184508-3	WG-11194450-051121-DT-002	Water	05/11/21 12:10	05/11/21 15:00	
480-184508-4	WG-11194450-051121-DT-003	Water	05/11/21 13:05	05/11/21 15:00	
480-184508-5	WG-11194450-051121-DT-004	Water	05/11/21 13:05	05/11/21 15:00	

CHAIN OF CUSTODY RECORD

COC NO.: 60256

PAGE 1 OF 1

Address: Niagara Falls Office

Phone: _____ **Fax:** _____

Project No/ Phase/Task Code: 11194450-06	**Laboratory Name:** Eurofins TestAmerica
Project Name: Graftech GW Sampling	**Lab Contact:** Denise Heckler
Project Location: Witmer Rd @ Hyde Park Blvd	**Lab Location:** Amherst NY
GHD Chemistry Contact: Sue Scrocchi	**SSOW ID:**
Sampler(s): D. Tyran	**Cooler No:**
Carrier: Hand Delivered	**Airbill No:**
Total # of Containers: 20	

Item	Sample Identification (Containers for each sample may be combined on one line)	Date (mm/dd//yy)	Time (hh:mm)	Matrix Code (see back of COC)	Grab (G) or Comp (C)	Filtered (Y/N)	Analysis Requested (See Back of COC for Definitions): VOCs	Total Containers/sample	MS/MSD Request	Comments/ Special Instructions:
	PRESERVATION - (SEE BACK OF COC FOR ABBREVIATIONS)						HC			
1	TB-11194450-051121-DT	5-11-21		TB	G	N	X	2		
2	WG-11194450-051121-DT-001	5-11-21	1115	WG	G	N	X	3		
3	WG-11194450-051121-DT-002	5-11-21	1210	WG	G	N	X	9	X	
4	WG-11194450-051121-DT-003	5-11-21	1305	WG	G	N	X	3		
5	WG-11194450-051121-DT-004	5-11-21	1305	WG	G	N	X	3		
6										
7										
8										
9										
10										
11										
12										

DJT

480-184508 Chain of Custody

TAT Required in business days (use separate COCs for different TATs):

☐ ☐ 1 Day ☐ 2 Days ☐ 3 Days ☐ 1 Week ☑ 2 Week

Notes/ Special Requirements:

3.0 ICE #1

	Relinquished By	Company	Date	Time	Received By	Company	Date	Time
1.	Dave Tyran	GHD	5/11/21	1342	1.	ETA	5-11-21	16:00
2.					2.			
3.					3.			

THE CHAIN OF CUSTODY IS A LEGAL DOCUMENT – ALL FIELDS MUST BE COMPLETED ACCURATELY

Distribution: WHITE – Fully Executed Copy (CRA) YELLOW – Receiving Laboratory Copy PINK – Shipper GOLDENROD – Sampling Crew

CRA Form: COC-10B (20110804)

Login Sample Receipt Checklist

Client: GHD Services Inc.

Job Number: 480-184508-1

Login Number: 184508
List Number: 1
Creator: Yeager, Brian A

List Source: Eurofins TestAmerica, Buffalo

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time (Excluding tests with immediate HTs)..	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	GHD
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	True	
Chlorine Residual checked.	N/A	

Attachment D

Data Validation Memo

Memorandum

May 28, 2021 - Revised October 25, 2021

To:	Maggie Popek, Shannon Dalton	Ref. No.:	11194450
From:	Kathy Shaw/ro/3-NF	Tel:	860 747-8298
CC:	Susan Scrocchi		

Subject: **Analytical Results and Reduced Validation**
Annual Groundwater Monitoring Program
GrafTech International Holdings, Inc.
Niagara Falls, New York
May 2021

1. Introduction

This document details a validation of analytical results for groundwater samples collected in support of the Annual Groundwater Monitoring Program at the Niagara Falls, New York Site in May 2021. Samples were submitted to Eurofins-TestAmerica Laboratory located in Amherst, New York. A sample collection and analysis summary is presented in Table 1. The validated analytical results are summarized in Table 2. A summary of the analytical methodology is presented in Table 3.

Standard Level 2 report deliverables were submitted by the laboratory. The final results and supporting quality assurance/quality control (QA/QC) data were assessed. Evaluation of the data was based on information obtained from the chain of custody form, finished report forms, method blank data, recovery data from surrogate spikes/laboratory control samples (LCS)/matrix spikes (MS), and field QC samples.

The QA/QC criteria by which these data have been assessed are outlined in the analytical method referenced in Table 3 and applicable guidance from the document entitled "USEPA National Functional Guidelines for Superfund Organic Methods Data Review", United States Environmental Protection Agency (USEPA) 540-R-2016-002, September 2016, subsequently referred to as the "Guidelines" in this Memorandum.

2. Sample Holding Time and Preservation

The sample holding time criterion for the analysis is summarized in Table 3. The sample chain of custody document and analytical report were used to determine sample holding times. All samples were prepared and analyzed within the required holding time.

All samples were properly preserved, delivered on ice, and stored by the laboratory at the required temperature (0-6°C).

3. Laboratory Blank Analyses

Method blanks are prepared from a purified matrix and analyzed with investigative samples to determine the existence and magnitude of sample contamination introduced during the analytical procedures.

For this study, laboratory method blanks were analyzed at a minimum frequency of 1 per 20 investigative samples and/or 1 per analytical batch.

All method blank results were non-detect for the compounds of interest.

4. Surrogate Spike Recoveries

In accordance with the method employed, all samples, blanks, and QC samples analyzed for volatile organic compounds (VOCs) are spiked with surrogate compounds prior to sample analysis. Surrogate recoveries provide a means to evaluate the effects of laboratory performance on individual sample matrices.

All samples submitted for VOC determinations were spiked with the appropriate number of surrogate compounds prior to sample analysis.

Surrogate recoveries were assessed against laboratory control limits. All surrogate recoveries met the laboratory criteria.

5. Laboratory Control Sample Analyses

LCS are prepared and analyzed as samples to assess the analytical efficiencies of the method employed, independent of sample matrix effects.

For this study, LCS were analyzed at a minimum frequency of 1 per 20 investigative samples and/or 1 per analytical batch.

The LCS contained all compounds of interest. A high VOC recovery was reported. All associated results were non-detect and were not impacted by the indicated high bias.

6. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analyses

To evaluate the effects of sample matrices on the preparation process, measurement procedures, and accuracy of a particular analysis, samples are spiked with known concentrations of the analytes of concern and analyzed as MS/MSD samples. The relative percent difference (RPD) between the MS and MSD is used to assess analytical precision. If the original sample concentration is significantly greater than the spike concentration, the recovery is not assessed. If only the MS or MSD recovery was outside of control limits, no

qualification of the data was performed based on the acceptable recovery of the companion spike and the acceptable RPD.

MS/MSD analysis was performed as specified in Table 1.

The MS/MSD sample was spiked with all compounds of interest. Non-detect sample results associated with high RPDs were not qualified. Non-detect data would not be impacted by the indicated variability.

7. Field QA/QC Samples

The field QA/QC consisted of one trip blank sample and one field duplicate sample set.

7.1 Trip Blank Sample Analysis

To evaluate contamination from sample collection, transportation, storage, and analytical activities, a trip blank was submitted to the laboratory for VOC analysis. All results were non-detect for the compounds of interest.

7.2 Field Duplicate Sample Analysis

To assess the analytical and sampling protocol precision, a field duplicate sample set was collected and submitted "blind" to the laboratory, as specified in Table 1. The RPDs associated with the duplicate sample must be less than 50 percent for water samples. If the reported concentration in either the investigative sample or its duplicate is less than five times the reporting limit (RL), the evaluation criterion is one times the RL value for water samples.

All field duplicate results were in agreement, demonstrating acceptable sampling and analytical precision.

8. Analyte Reporting

The laboratory reported detected results down to the laboratory's method detection limit (MDL) for each analyte. No positive analyte detections less than the RL but greater than the MDL were reported. Non-detect results were presented as non-detect at the RL in Table 2.

9. Conclusion

Based on the assessment detailed in the foregoing, the data summarized in Table 2 are acceptable without qualification.

Table 1

Sample Collection and Analysis Summary
Annual Groundwater Monitoring Program
GrafTech International Holdings, Inc.
Niagara Falls, New York
May 2021

					Analysis/Parameters	
Sample Identification	**Location**	**Matrix**	**Collection Date (mm/dd/yyyy)**	**Collection Time (hr:min)**	**VOC**	**Comments**
WG-11194450-051121-DT-00	BW-3	Water	05/11/2021	12:10	X	MS/MSD
WG-11194450-051121-DT-00	BW-4	Water	05/11/2021	13:05	X	
WG-11194450-051121-DT-00	BW-4	Water	05/11/2021	13:05	X	Field Duplicate (BW-4)
WG-11194450-051121-DT-00	GW-8B	Water	05/11/2021	11:15	X	
TB-11194450-051121-DT	--	Water	05/11/2021	00:00	X	Trip Blank

Notes:

MS/MSD - Matrix Spike/Matrix Spike Duplicate
VOC - Volatile Organic Compounds

Table 2

Analytical Results Summary
Annual Groundwater Monitoring Program
GrafTech International Holdings, Inc.
Niagara Falls, New York
May 2021

Location ID:			BW-3	BW-4	BW-4	GW-8B
Sample Name:			WG-11194450-051121-DT-002	WG-11194450-051121-DT-003	WG-11194450-051121-DT-004	WG-11194450-051121-DT-001
Sample Date:			05/11/2021	05/11/2021	05/11/2021 Duplicate	05/11/2021
Parameters	**Unit**	**NYSDEC Class GA Criteria/TOGS**				
Volatile Organic Compounds						
1,1,1-Trichloroethane	µg/L	5	1.0 U	20 U	20 U	1.0 U
1,1,2,2-Tetrachloroethane	µg/L	5	1.0 U	20 U	20 U	1.0 U
1,1,2-Trichloroethane	µg/L	1	1.0 U	20 U	20 U	1.0 U
1,1-Dichloroethane	µg/L	5	1.0 U	20 U	20 U	1.0 U
1,1-Dichloroethene	µg/L	5	1.0 U	20 U	20 U	1.0 U
1,2-Dichloroethane	µg/L	0.6	1.0 U	20 U	20 U	1.0 U
1,2-Dichloroethene (total)	µg/L	5	2.5	570	480	20
1,2-Dichloropropane	µg/L	1	1.0 U	20 U	20 U	1.0 U
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	50	10 U	200 U	200 U	10 U
2-Hexanone	µg/L	50	5.0 U	100 U	100 U	5.0 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	--	5.0 U	100 U	100 U	5.0 U
Acetone	µg/L	50	10 U	200 U	200 U	10 U
Benzene	µg/L	1	1.0 U	20 U	20 U	1.0 U
Bromodichloromethane	µg/L	50	1.0 U	20 U	20 U	1.0 U
Bromoform	µg/L	5	1.0 U	20 U	20 U	1.0 U
Bromomethane (Methyl bromide)	µg/L	5	1.0 U	20 U	20 U	1.0 U
Carbon disulfide	µg/L	60	1.0 U	20 U	20 U	1.0 U
Carbon tetrachloride	µg/L	5	1.0 U	20 U	20 U	1.0 U
Chlorobenzene	µg/L	5	1.0 U	20 U	20 U	1.0 U
Chloroethane	µg/L	5	1.0 U	20 U	20 U	1.0 U
Chloroform (Trichloromethane)	µg/L	7	1.0 U	20 U	20 U	1.0 U
Chloromethane (Methyl chloride)	µg/L	5	1.0 U	20 U	20 U	1.0 U
cis-1,2-Dichloroethene	µg/L	5	2.5	570	480	20
cis-1,3-Dichloropropene	µg/L	0.4	1.0 U	20 U	20 U	1.0 U
Dibromochloromethane	µg/L	50	1.0 U	20 U	20 U	1.0 U
Ethylbenzene	µg/L	5	1.0 U	20 U	20 U	1.0 U
Methylene chloride	µg/L	5	1.0 U	20 U	20 U	1.0 U
Styrene	µg/L	5	1.0 U	20 U	20 U	1.0 U
Tetrachloroethene	µg/L	5	1.0 U	200	190	1.0 U
Toluene	µg/L	5	1.0 U	20 U	20 U	1.0 U
trans-1,2-Dichloroethene	µg/L	5	1.0 U	20 U	20 U	1.0 U
trans-1,3-Dichloropropene	µg/L	0.4	1.0 U	20 U	20 U	1.0 U
Trichloroethene	µg/L	5	1.0 U	300	260	3.6
Vinyl chloride	µg/L	2	9.1	89	72	3.2
Xylenes (total)	µg/L	5	2.0 U	40 U	40 U	2.0 U

Notes:

U - Not detected at the associated reporting limit
TOGS - Technical and Operational Guidance Series
- Boxed values are greater than regulatory limit

Table 3

Analytical Methods
Annual Groundwater Monitoring Program
GrafTech International Holdings, Inc.
Niagara Falls, New York
May 2021

Parameter	Method	Matrix	Preservation	Holding Time Collection to Analysis (Days)
Volatile Organic Compounds (VOC)	SW-846 8260B	Water	pH < 2 and Iced, 0-6° C	14

Notes:

Method References:
SW-846 - "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, Third Edition, 1986, with subsequent revisions

Appendix E

Copy of Signed Institutional and Engineering Controls Certification Form

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Division of Environmental Remediation
625 Broadway, 11th Floor, Albany, NY 12233-7020
P: (518)402-9543 | F: (518)402-9547
www.dec.ny.gov

11/16/2021

Ms. Julianne Snyder
Project Manager
GrafTech International Holdings, Inc.
982 Keynote Circle
Brooklyn Heights, OH 44131
julianne.snyder@graftech.com

Re: Reminder Notice: Site Management Periodic Review Report and IC/EC Certification Submittal
Site Name: GrafTech Intl. Hlds. Inc. (formerly Union Carbide)
Site No.: 932035
Site Address: Hyde Park Boulevard
Niagara, NY 14303

Dear Ms. Julianne Snyder:

This letter serves as a reminder that sites in active Site Management (SM) require the submittal of a periodic progress report. This report, referred to as the Periodic Review Report (PRR), must document the implementation of, and compliance with, site-specific SM requirements. Section 6.3(b) of DER-10 *Technical Guidance for Site Investigation and Remediation* (available online at http://www.dec.ny.gov/regulations/67386.html) provides guidance regarding the information that must be included in the PRR. Further, if the site is comprised of multiple parcels, then you as the Certifying Party must arrange to submit one PRR for all parcels that comprise the site. The PRR must be received by the Department no later than **January 30, 2022**. Guidance on the content of a PRR is enclosed.

Site Management is defined in regulation (6 NYCRR 375-1.2(at)) and in Chapter 6 of DER-10. Depending on when the remedial program for your site was completed, SM may be governed by multiple documents (e.g., Operation, Maintenance, and Monitoring Plan; Soil Management Plan) or one comprehensive Site Management Plan.

A Site Management Plan (SMP) may contain one or all of the following elements, as applicable to the site: a plan to maintain institutional controls and/or engineering controls ("IC/EC Plan"); a plan for monitoring the performance and effectiveness of the selected remedy ("Monitoring Plan"); and/or a plan for the operation and maintenance of the selected remedy ("O&M Plan"). Additionally, the technical requirements for SM are stated in the decision document (e.g., Record of Decision) and, in some cases, the legal agreement directing the remediation of the site (e.g., order on consent, voluntary agreement, etc.).

When you submit the PRR (by the due date above), include the enclosed forms documenting that all SM requirements are being met. The Institutional Controls (ICs) portion of the form (Box 6) must be signed by you or your designated representative. The Engineering Controls (ECs) portion of the form (Box 7) must be signed by a Qualified Environmental Professional (QEP). If you cannot certify that all SM requirements are being met, you must submit a Corrective Measures Work Plan that identifies the actions to be taken to restore compliance. The work plan must include a schedule to be approved by the Department. The Periodic Review process will not be considered complete until all necessary corrective measures are completed and all required controls are certified. Instructions for completing the certifications are enclosed.

All site-related documents and data, including the PRR, must be submitted in electronic format to the Department of Environmental Conservation. The required format for documents is an Adobe PDF file with optical character recognition and no password protection. Data must be submitted as an electronic data deliverable (EDD) according to the instructions on the following webpage:

https://www.dec.ny.gov/chemical/62440.html

Documents may be submitted to the project manager either through electronic mail or by using the Department's file transfer service at the following webpage:

https://fts.dec.state.ny.us/fts/

The Department will not approve the PRR unless all documents and data generated in support of the PRR have been submitted using the required formats and protocols.

You may contact Andrew Zwack, the Project Manager, at 716-851-7284 or andrew.zwack@dec.ny.gov with any questions or concerns about the site. Please notify the project manager before conducting inspections or field work. You may also write to the project manager at the following address:

New York State Department of Environmental Conservation
270 Michigan Ave

Buffalo, NY 14203-2915

Enclosures

PRR General Guidance
Certification Form Instructions
Certification Forms

ec: w/ enclosures
Andrew Zwack, Project Manager
Stanley Radon, Hazardous Waste Remediation Supervisor, Region 9

Enclosure 1

Certification Instructions

I. Verification of Site Details (Box 1 and Box 2):

Answer the three questions in the Verification of Site Details Section. The Owner and/or Qualified Environmental Professional (QEP) may include handwritten changes and/or other supporting documentation, as necessary.

II. Certification of Institutional Controls/ Engineering Controls (IC/ECs)(Boxes 3, 4, and 5)

1.1.1. Review the listed IC/ECs, confirming that all existing controls are listed, and that all existing controls are still applicable. If there is a control that is no longer applicable the Owner / Remedial Party should petition the Department separately to request approval to remove the control.

2. In Box 5, complete certifications for all Plan components, as applicable, by checking the corresponding checkbox.

3. If you cannot certify "YES" for each Control listed in Box 3 & Box 4, sign and date the form in Box 5. Attach supporting documentation that explains why the **Certification** cannot be rendered, as well as a plan of proposed corrective measures, and an associated schedule for completing the corrective measures. Note that this **Certification** form must be submitted even if an IC or EC cannot be certified; however, the certification process will not be considered complete until corrective action is completed.

If the Department concurs with the explanation, the proposed corrective measures, and the proposed schedule, a letter authorizing the implementation of those corrective measures will be issued by the Department's Project Manager. Once the corrective measures are complete, a new Periodic Review Report (with IC/EC Certification) must be submitted within 45 days to the Department. If the Department has any questions or concerns regarding the PRR and/or completion of the IC/EC Certification, the Project Manager will contact you.

III. IC/EC Certification by Signature (Box 6 and Box 7**):**

If you certified "YES" for each Control, please complete and sign the IC/EC Certifications page as follows:

- For the Institutional Controls on the use of the property, the certification statement in Box 6 shall be completed and may be made by the property owner or designated representative.

- For the Engineering Controls, the certification statement in Box 7 must be completed by a Professional Engineer or Qualified Environmental Professional, as noted on the form.

Enclosure 2
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Site Management Periodic Review Report Notice
Institutional and Engineering Controls Certification Form

Site Details **Box 1**

Site No. 932035

Site Name GrafTech Intl. Hlds. Inc. (formerly Union Carbide)

Site Address: Hyde Park Boulevard Zip Code: 14303
City/Town: Niagara
County: Niagara
Site Acreage: 61.800

Reporting Period: December 31, 2020 to December 31, 2021

	YES	NO
1. Is the information above correct?	☑	☐
If NO, include handwritten above or on a separate sheet.		
2. Has some or all of the site property been sold, subdivided, merged, or undergone a tax map amendment during this Reporting Period?	☐	☑
3. Has there been any change of use at the site during this Reporting Period (see 6NYCRR 375-1.11(d))?	☐	☑
4. Have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property during this Reporting Period?	☐	☑
If you answered YES to questions 2 thru 4, include documentation or evidence that documentation has been previously submitted with this certification form.		
5. Is the site currently undergoing development?	☐	☑

Box 2

	YES	NO
6. Is the current site use consistent with the use(s) listed below? Industrial	☑	☐
7. Are all ICs in place and functioning as designed?	☑	☐

IF THE ANSWER TO EITHER QUESTION 6 OR 7 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

N/A

Signature of Owner, Remedial Party or Designated Representative Date

SITE NO. 932035 **Box 3**

Description of Institutional Controls

Parcel	Owner	Institutional Control
130.20-1-1	GrafTech International Holdings Inc.	
		Site Management Plan
		Monitoring Plan

Per the Site Management Plan dated December 17, 2013; groundwater monitoring and landfill cap maintenance is required.

Box 4

Description of Engineering Controls

Parcel	Engineering Control
130.20-1-1	
	Monitoring Wells
	Fencing/Access Control
	Cover System

Constructed cover system and closed under Division of Materials Management Part 360 in 1987.

Box 5

Periodic Review Report (PRR) Certification Statements

1. I certify by checking "YES" below that:

   a) the Periodic Review report and all attachments were prepared under the direction of, and reviewed by, the party making the Engineering Control certification;

   b) to the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and the information presented is accurate and compete.

YES	NO
☑	☐

2. For each Engineering control listed in Box 4, I certify by checking "YES" below that all of the following statements are true:

   (a) The Engineering Control(s) employed at this site is unchanged since the date that the Control was put in-place, or was last approved by the Department;

   (b) nothing has occurred that would impair the ability of such Control, to protect public health and the environment;

   (c) access to the site will continue to be provided to the Department, to evaluate the remedy, including access to evaluate the continued maintenance of this Control;

   (d) nothing has occurred that would constitute a violation or failure to comply with the Site Management Plan for this Control; and

   (e) if a financial assurance mechanism is required by the oversight document for the site, the mechanism remains valid and sufficient for its intended purpose established in the document.

YES	NO
☑	☐

IF THE ANSWER TO QUESTION 2 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

N/A

Signature of Owner, Remedial Party or Designated Representative

Date

IC CERTIFICATIONS
SITE NO. 932035

Box 6

SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE

I certify that all information and statements in Boxes 1,2, and 3 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I Thomas R. Jacques (print name) at 982 Keynote Circle, Brooklyn Heights, Ohio 44131 (print business address),

am certifying as Designated Representative of Owner (Owner or Remedial Party)

for the Site named in the Site Details Section of this form.

T. R. Jacques — 1/11/2022

Signature of Owner, Remedial Party, or Designated Representative Rendering Certification — Date

EC CERTIFICATIONS

Box 7

Qualified Environmental Professional Signature

I certify that all information in Boxes 4 and 5 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I Julianne M. Snyder (print name) at 982 Keynote Circle, Brooklyn Heights, Ohio 44131 (print business address),

am certifying as a Qualified Environmental Professional for the Owner (Owner or Remedial Party)

Julianne M. Snyder	N/A	1/25/2022
Signature of Qualified Environmental Professional, for the Owner or Remedial Party, Rendering Certification	Stamp (Required for PE)	Date

Enclosure 3
Periodic Review Report (PRR) General Guidance

I. Executive Summary: (1/2-page or less)
   A. Provide a brief summary of site, nature and extent of contamination, and remedial history.
   B. Effectiveness of the Remedial Program - Provide overall conclusions regarding;
      1. progress made during the reporting period toward meeting the remedial objectives for the site
      2. the ultimate ability of the remedial program to achieve the remedial objectives for the site.
   C. Compliance
      1. Identify any areas of non-compliance regarding the major elements of the Site Management Plan (SMP, i.e., the Institutional/Engineering Control (IC/EC) Plan, the Monitoring Plan, and the Operation & Maintenance (O&M) Plan).
      2. Propose steps to be taken and a schedule to correct any areas of non-compliance.
   D. Recommendations
      1. recommend whether any changes to the SMP are needed
      2. recommend any changes to the frequency for submittal of PRRs (increase, decrease)
      3. recommend whether the requirements for discontinuing site management have been met.

II. Site Overview (one page or less)
   A. Describe the site location, boundaries (figure), significant features, surrounding area, and the nature and extent of contamination prior to site remediation.
   B. Describe the chronology of the main features of the remedial program for the site, the components of the selected remedy, cleanup goals, site closure criteria, and any significant changes to the selected remedy that have been made since remedy selection.

III. Evaluate Remedy Performance, Effectiveness, and Protectiveness
   Using tables, graphs, charts and bulleted text to the extent practicable, describe the effectiveness of the remedy in achieving the remedial goals for the site. Base findings, recommendations, and conclusions on objective data. Evaluations and should be presented simply and concisely.

IV. IC/EC Plan Compliance Report (if applicable)
   A. IC/EC Requirements and Compliance
      1. Describe each control, its objective, and how performance of the control is evaluated.
      2. Summarize the status of each goal (whether it is fully in place and its effectiveness).
      3. Corrective Measures: describe steps proposed to address any deficiencies in ICECs.
      4. Conclusions and recommendations for changes.
   B. IC/EC Certification
      1. The certification must be complete (even if there are IC/EC deficiencies), and certified by the appropriate party as set forth in a Department-approved certification form(s).

V. Monitoring Plan Compliance Report (if applicable)
   A. Components of the Monitoring Plan (tabular presentations preferred) - Describe the requirements of the monitoring plan by media (i.e., soil, groundwater, sediment, etc.) and by any remedial technologies being used at the site.
   B. Summary of Monitoring Completed During Reporting Period - Describe the monitoring tasks actually completed during this PRR reporting period. Tables and/or figures should be used to show all data.
   C. Comparisons with Remedial Objectives - Compare the results of all monitoring with the remedial objectives for the site. Include trend analyses where possible.
   D. Monitoring Deficiencies - Describe any ways in which monitoring did not fully comply with the monitoring plan.
   E. Conclusions and Recommendations for Changes - Provide overall conclusions regarding the monitoring completed and the resulting evaluations regarding remedial effectiveness.

VI. Operation & Maintenance (O&M) Plan Compliance Report (if applicable)
   A. Components of O&M Plan - Describe the requirements of the O&M plan including required activities, frequencies, recordkeeping, etc.
   B. Summary of O&M Completed During Reporting Period - Describe the O&M tasks actually completed during this PRR reporting period.
   C. Evaluation of Remedial Systems - Based upon the results of the O&M activities completed, evaluated

the ability of each component of the remedy subject to O&M requirements to perform as designed/expected.

D. O&M Deficiencies - Identify any deficiencies in complying with the O&M plan during this PRR reporting period.

E. Conclusions and Recommendations for Improvements - Provide an overall conclusion regarding O&M for the site and identify any suggested improvements requiring changes in the O&M Plan.

VII. Overall PRR Conclusions and Recommendations

A. Compliance with SMP - For each component of the SMP (i.e., IC/EC, monitoring, O&M), summarize;
   1. whether all requirements of each plan were met during the reporting period
   2. any requirements not met
   3. proposed plans and a schedule for coming into full compliance.

B. Performance and Effectiveness of the Remedy - Based upon your evaluation of the components of the SMP, form conclusions about the performance of each component and the ability of the remedy to achieve the remedial objectives for the site.

C. Future PRR Submittals
   1. Recommend, with supporting justification, whether the frequency of the submittal of PRRs should be changed (either increased or decreased).
   2. If the requirements for site closure have been achieved, contact the Departments Project Manager for the site to determine what, if any, additional documentation is needed to support a decision to discontinue site management.

VIII. Additional Guidance

Additional guidance regarding the preparation and submittal of an acceptable PRR can be obtained from the Departments Project Manager for the site.

Appendix F

Copies of Weekly General Landfill and Site Security Inspection Reports – 2021

APPENDIX A - WEEKLY GENERAL LANDFILL AND SITE SECURITY INSPECTION REPORT

Date	Time	Inspector Name
11/21	230	John Sweargayan

FENCE AREA	OK	DAMAGED	REPAIR DATE	REMARKS
A	✓			
B	✓			
C	✓			
D	✓			
E	✓			
F	✓			
G	✓			
H	✓			
I	✓			
J	✓			

GATE	OK	DAMAGED	REPAIR DATE	REMARKS
1	✓			
2	✓			
3	✓			

SECURITY-RELATED ENGINEERED CONTROLS COMMENTS: (Check for condition, damage, signs of security breach)

all good

CAP COMMENTS: (Check for erosion and adequate vegetation)

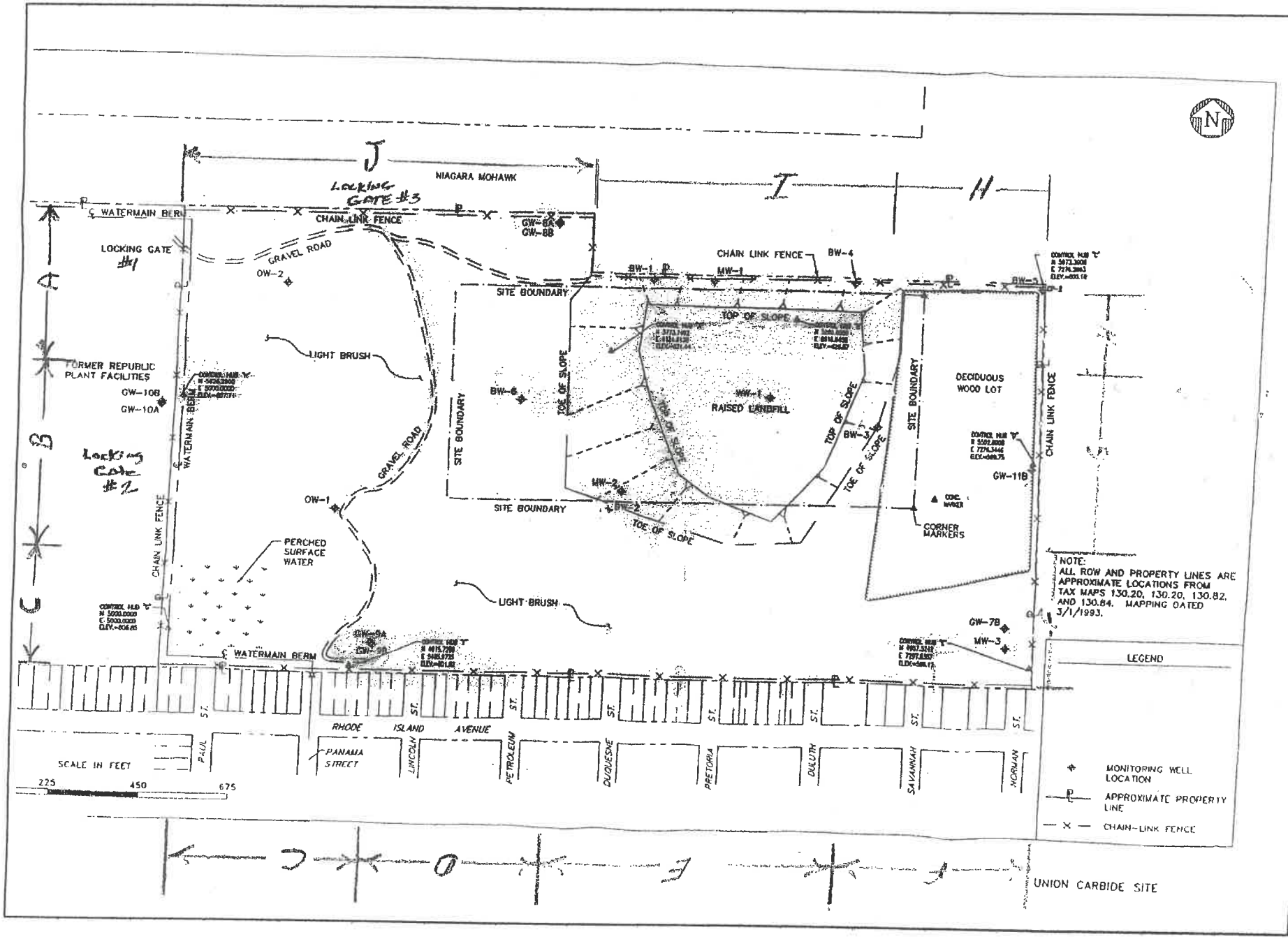
all good

SURROUNDING AREA COMMENTS: (Check for condition, damage, signs of security breach)

all good

RECORD THE DATE(S) THAT THE ENTIRE CAP WAS MOWED:_____

IN THE EVENT THAT ANY SIGN OF A SITE SECURITY BREACH IS IDENTIFIED DURING THE ABOVE SITE INSPECTIONS, COMPLETE A FULL GROUNDWATER MONITORING WELL INSPECTION AND DOCUMENT RESULTS USING THE QUARTERLY GROUNDWATER WELL INSPECTION REPORT FORM (APPENDIX B) AND ATTACH TO THIS FORM.



Employee John

Date 11

APPENDIX A - WEEKLY GENERAL LANDFILL AND SITE SECURITY INSPECTION REPORT

Date	Time	Inspector Name
1/10/21	3:00	John Secalogo

FENCE AREA	OK	DAMAGED	REPAIR DATE	REMARKS
A	✓			
B	✓			
C	✓			
D	✓			
E	✓			
F	✗	fallen tree		
G		fallen tree		
H		fallen tree, fence damage		
I	✓			
J	✓			

GATE	OK	DAMAGED	REPAIR DATE	REMARKS
1	✓			
2	✓			
3	✓			

SECURITY-RELATED ENGINEERED CONTROLS COMMENTS: (Check for condition, damage, signs of security breach)

fallen trees fence damage

CAP COMMENTS: (Check for erosion and adequate vegetation)

all good

SURROUNDING AREA COMMENTS: (Check for condition, damage, signs of security breach)

fallen tree fence damage

RECORD THE DATE(S) THAT THE ENTIRE CAP WAS MOWED: _____

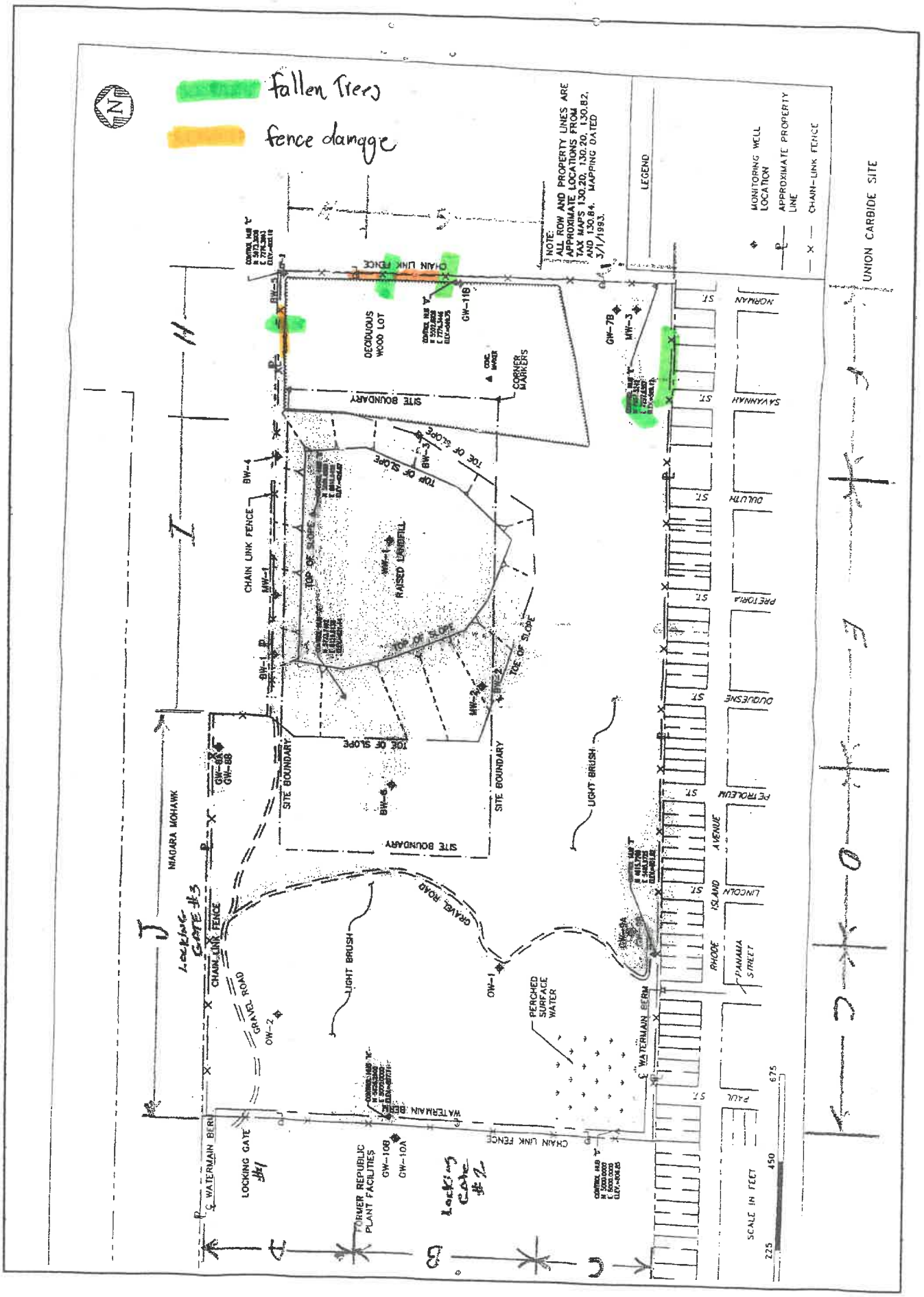
IN THE EVENT THAT ANY SIGN OF A SITE SECURITY BREACH IS IDENTIFIED DURING THE ABOVE SITE INSPECTIONS, COMPLETE A FULL GROUNDWATER MONITORING WELL INSPECTION AND DOCUMENT RESULTS USING THE QUARTERLY GROUNDWATER WELL INSPECTION REPORT FORM (APPENDIX B) AND ATTACH TO THIS FORM.

John S

Employee

1/10

Date



APPENDIX A - WEEKLY GENERAL LANDFILL AND SITE SECURITY INSPECTION REPORT

Date	Time	Inspector Name
1-17-21	1230	John Scerbanya

ENCE ARE	OK	DAMAGED	REPAIR DATE	REMARKS
A	✓			
B	✓			
C	✓			
D	✓			
E	✓			
F	✓			
G	✓			
H	✓			
I	✓			
J	✓			

GATE	OK	DAMAGED	REPAIR DATE	REMARKS
1	✓			
2	✓			
3	✓			

SECURITY-RELATED ENGINEERED CONTROLS COMMENTS: (Check for condition, damage, signs of security breach)

all good

CAP COMMENTS: (Check for erosion and adequate vegetation)

all good

SURROUNDING AREA COMMENTS: (Check for condition, damage, signs of security breach)

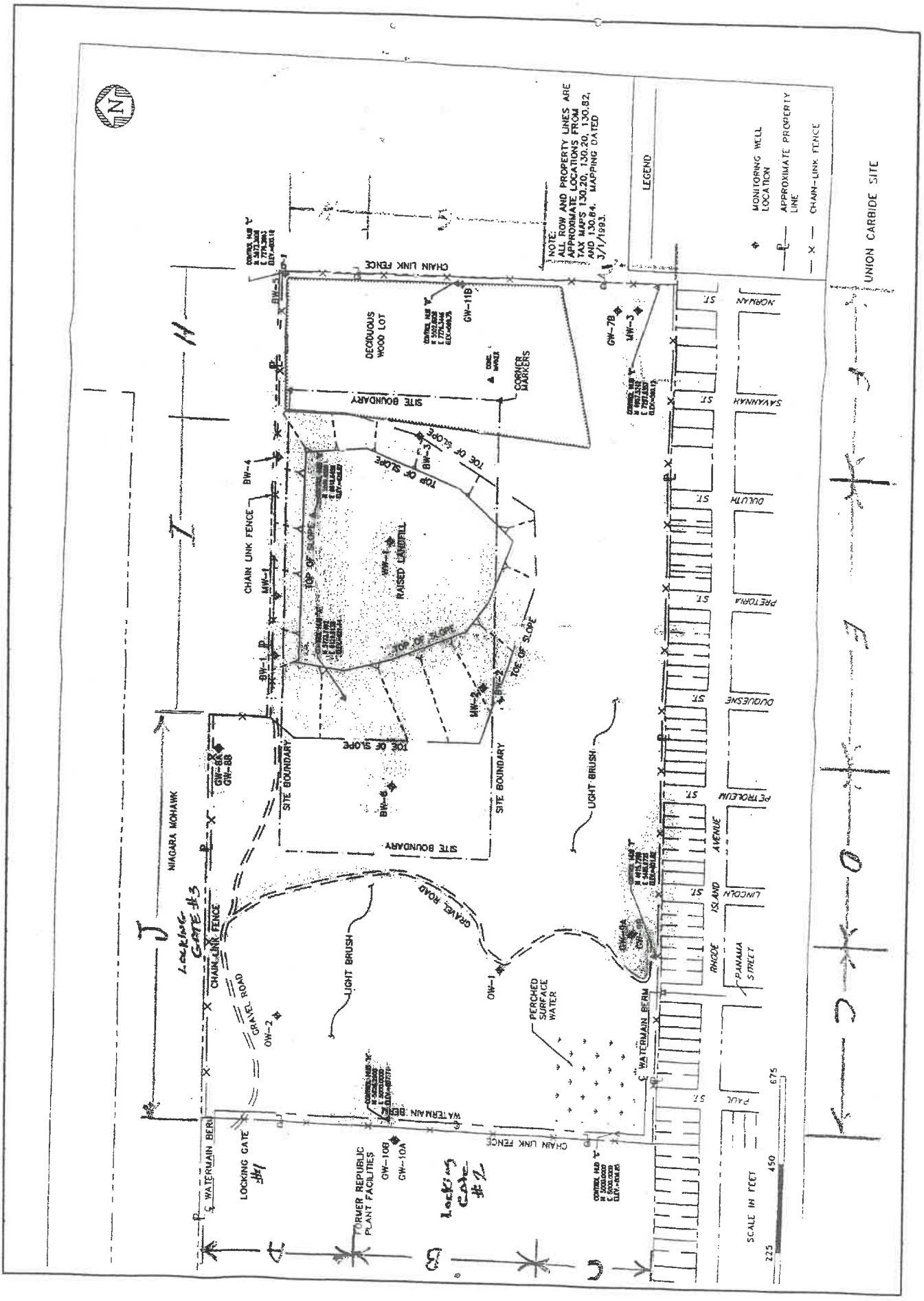
all good

RECORD THE DATE(S) THAT THE ENTIRE CAP WAS MOWED:_____

IN THE EVENT THAT ANY SIGN OF A SITE SECURITY BREACH IS IDENTIFIED DURING THE ABOVE SITE INSPECTIONS, COMPLETE A FULL GROUNDWATER MONITORING WELL INSPECTION AND DOCUMENT RESULTS USING THE QUARTERLY GROUNDWATER WELL INSPECTION REPORT FORM (APPENDIX B) AND ATTACH TO THIS FORM.

John S
Employee

1/17
Date



APPENDIX A - WEEKLY GENERAL LANDFILL AND SITE SECURITY INSPECTION REPORT

Date	Time	Inspector Name
1-26-21	3:30	Ed Savage

FENCE AREA	OK	DAMAGED	REPAIR DATE	REMARKS
A	✓			
B	✓			
C	✓			
D	✓			
E	✓			
F	✓			
G	✓			
H	✓			
I	✓			
J				

GATE	OK	DAMAGED	REPAIR DATE	REMARKS
1	✓			
2	✓			
3	✓			

SECURITY-RELATED ENGINEERED CONTROLS COMMENTS: (Check for condition, damage, signs of security breach)

all good

CAP COMMENTS: (Check for erosion and adequate vegetation)

all good

SURROUNDING AREA COMMENTS: (Check for condition, damage, signs of security breach)

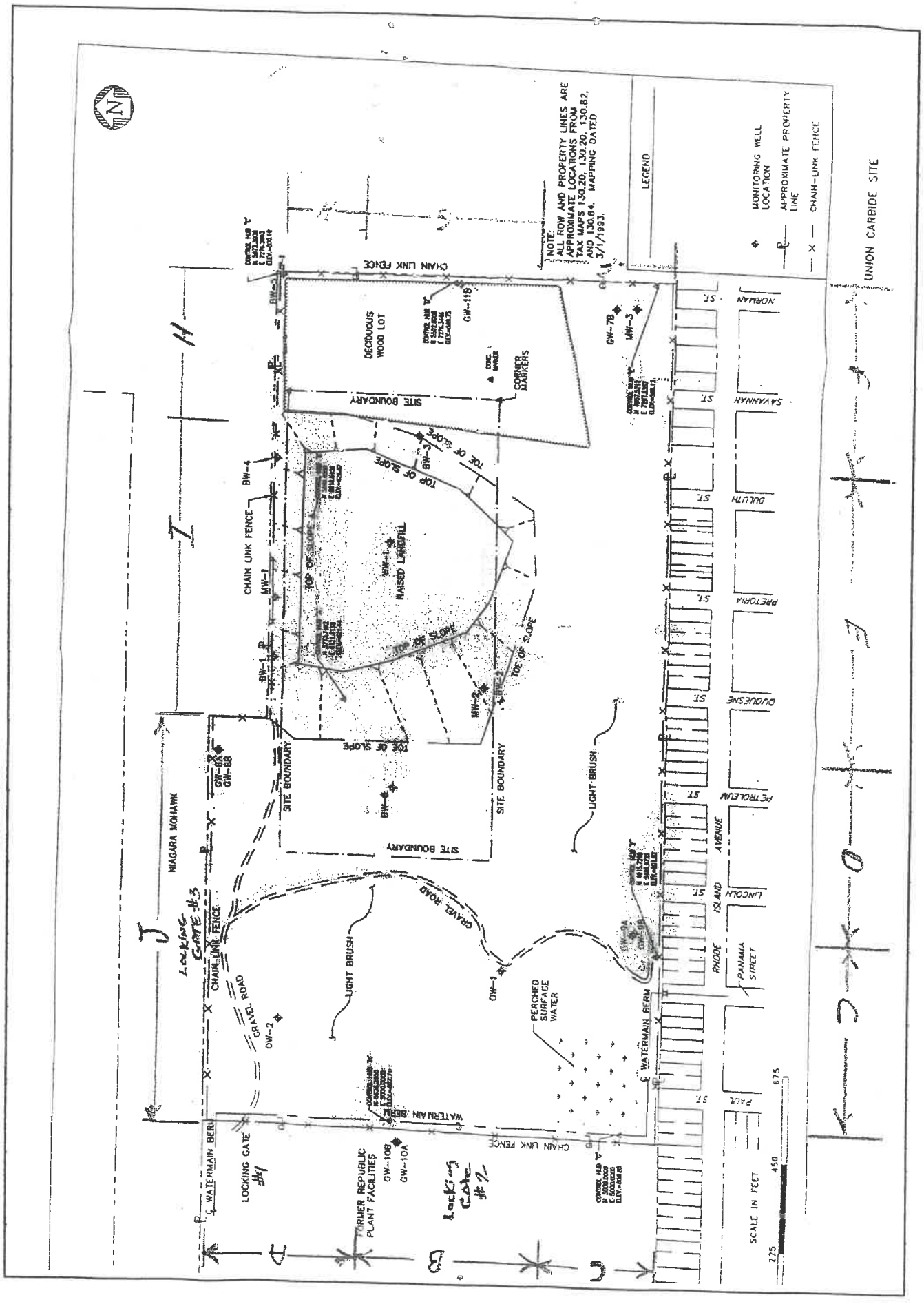
all good

RECORD THE DATE(S) THAT THE ENTIRE CAP WAS MOWED: _____

IN THE EVENT THAT ANY SIGN OF A SITE SECURITY BREACH IS IDENTIFIED DURING THE ABOVE SITE INSPECTIONS, COMPLETE A FULL GROUNDWATER MONITORING WELL INSPECTION AND DOCUMENT RESULTS USING THE QUARTERLY GROUNDWATER WELL INSPECTION REPORT FORM (APPENDIX B) AND ATTACH TO THIS FORM.

John S
Employee

1/26
Date



APPENDIX A - WEEKLY GENERAL LANDFILL AND SITE SECURITY INSPECTION REPORT

Date	Time	Inspector Name
2-1-21	2:30	John Sweeney

FENCE AREA	OK	DAMAGED	REPAIR DATE	REMARKS
A	✓			
B	✓			
C	✓			
D	✓			
E	✓			
F	✓			
G	✓			
H	✓			
I	✓			
J	✓			

GATE	OK	DAMAGED	REPAIR DATE	REMARKS
1	✓			
2	✓			
3	✓			

SECURITY-RELATED ENGINEERED CONTROLS COMMENTS: (Check for condition, damage, signs of security breach)

all good

CAP COMMENTS: (Check for erosion and adequate vegetation)

all good

SURROUNDING AREA COMMENTS: (Check for condition, damage, signs of security breach)

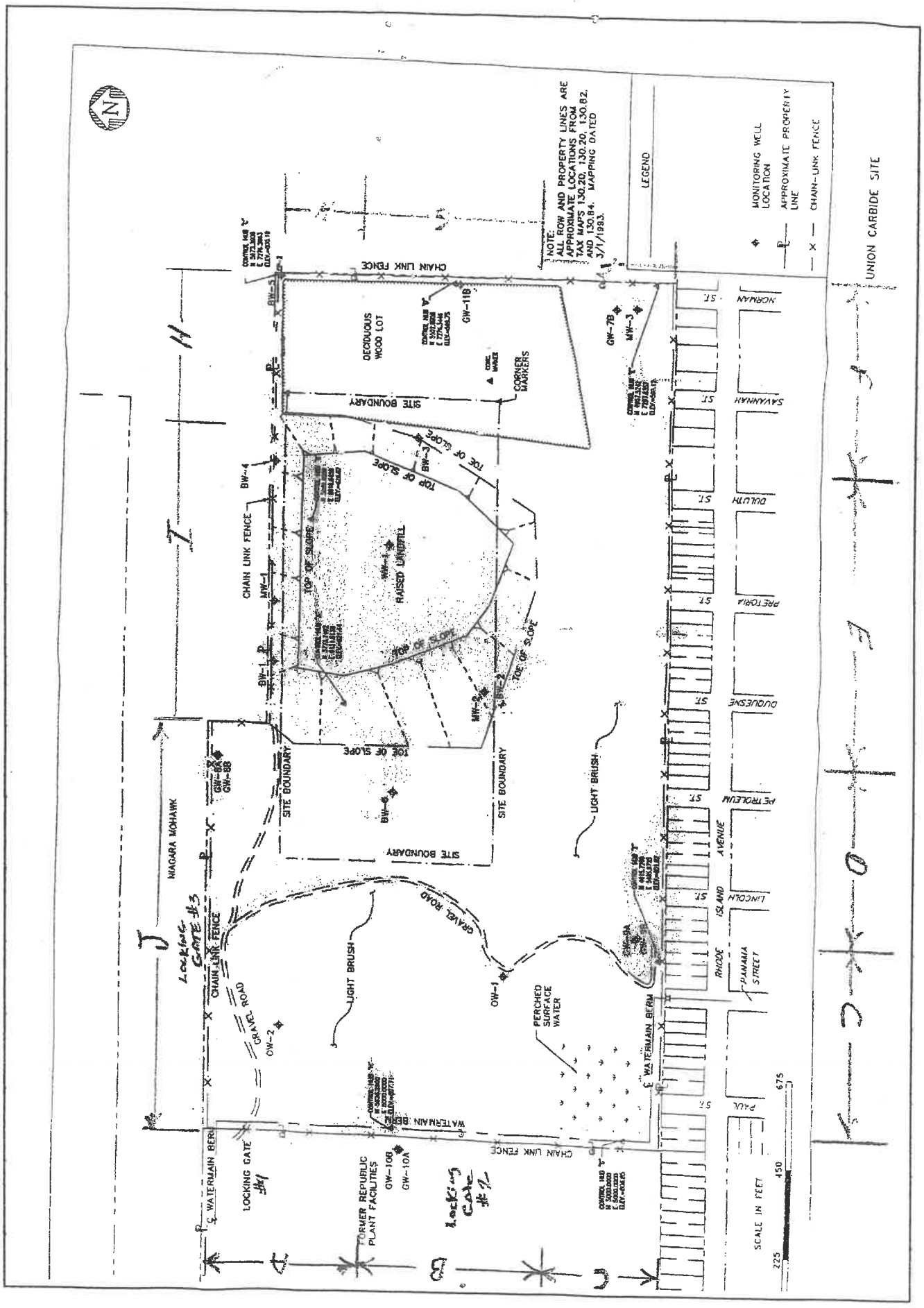
all good

RECORD THE DATE(S) THAT THE ENTIRE CAP WAS MOWED:_____

IN THE EVENT THAT ANY SIGN OF A SITE SECURITY BREACH IS IDENTIFIED DURING THE ABOVE SITE INSPECTIONS, COMPLETE A FULL GROUNDWATER MONITORING WELL INSPECTION AND DOCUMENT RESULTS USING THE QUARTERLY GROUNDWATER WELL INSPECTION REPORT FORM (APPENDIX B) AND ATTACH TO THIS FORM.

John S
Employee

2/1
Date



APPENDIX A - WEEKLY GENERAL LANDFILL AND SITE SECURITY INSPECTION REPORT

Date	Time	Inspector Name
2/10/21	4:00 pm	John Sweeney

FENCE AREA	OK	DAMAGED	REPAIR DATE	REMARKS
A	✓			
B	✓			
C	✓			
D	✓			
E	✓			
F	✓			
G	✓			
H	✓			
I	✓			
J				

GATE	OK	DAMAGED	REPAIR DATE	REMARKS
1	✓			
2	✓			
3	✓			

SECURITY-RELATED ENGINEERED CONTROLS COMMENTS: (Check for condition, damage, signs of security breach)

all good

CAP COMMENTS: (Check for erosion and adequate vegetation)

all good

SURROUNDING AREA COMMENTS: (Check for condition, damage, signs of security breach)

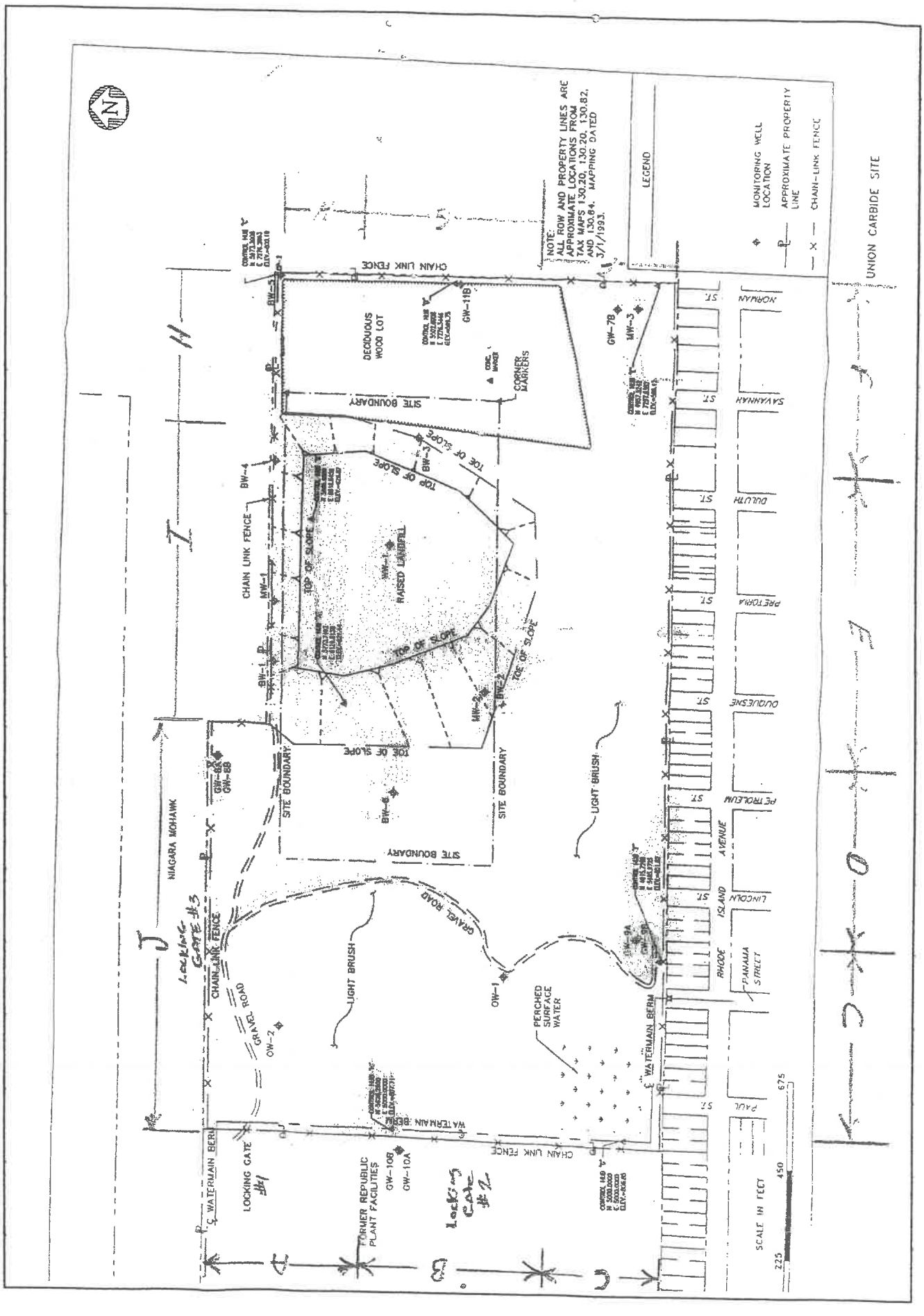
all good

RECORD THE DATE(S) THAT THE ENTIRE CAP WAS MOWED:_____

IN THE EVENT THAT ANY SIGN OF A SITE SECURITY BREACH IS IDENTIFIED DURING THE ABOVE SITE INSPECTIONS, COMPLETE A FULL GROUNDWATER MONITORING WELL INSPECTION AND DOCUMENT RESULTS USING THE QUARTERLY GROUNDWATER WELL INSPECTION REPORT FORM (APPENDIX B) AND ATTACH TO THIS FORM.

John S
Employee

2/10
Date



APPENDIX A - WEEKLY GENERAL LANDFILL AND SITE SECURITY INSPECTION REPORT

Date	Time	Inspector Name
2/13/21	1:30	John Scarbrough

FENCE AREA	OK	DAMAGED	REPAIR DATE	REMARKS
A	✓			
B	✓			
C	✓			
D	✓			
E	✓			
F	✓			
G	✓			
H	✓			
I	✓			
J				

GATE	OK	DAMAGED	REPAIR DATE	REMARKS
1	✓			
2	✓			
3	✓			

SECURITY-RELATED ENGINEERED CONTROLS COMMENTS: (Check for condition, damage, signs of security breach)

all good

CAP COMMENTS: (Check for erosion and adequate vegetation)

all good

SURROUNDING AREA COMMENTS: (Check for condition, damage, signs of security breach)

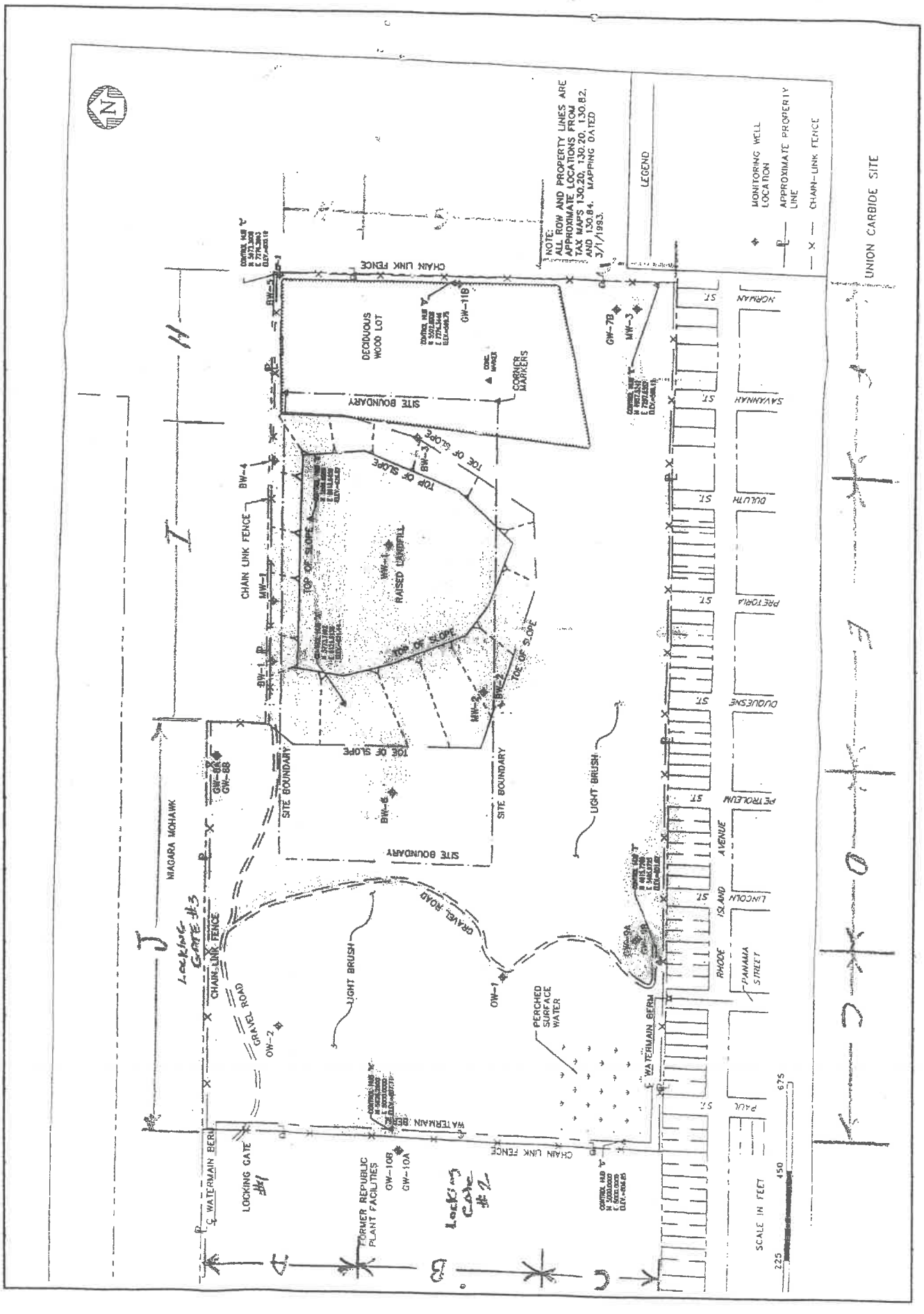
all good

RECORD THE DATE(S) THAT THE ENTIRE CAP WAS MOWED:_____

IN THE EVENT THAT ANY SIGN OF A SITE SECURITY BREACH IS IDENTIFIED DURING THE ABOVE SITE INSPECTIONS, COMPLETE A FULL GROUNDWATER MONITORING WELL INSPECTION AND DOCUMENT RESULTS USING THE QUARTERLY GROUNDWATER WELL INSPECTION REPORT FORM (APPENDIX B) AND ATTACH TO THIS FORM.

JohnS
Employee

2/13
Date



APPENDIX A - WEEKLY GENERAL LANDFILL AND SITE SECURITY INSPECTION REPORT

Date	Time	Inspector Name
2/20/21	12:30	John Swedlenger

FENCE AREA	OK	DAMAGED	REPAIR DATE	REMARKS
A	✓			
B	✓			
C	✓			
D	✓			
E	✓			
F	✓			
G	✓			
H	✓			
I	✓			
J	✓			

GATE	OK	DAMAGED	REPAIR DATE	REMARKS
1	✓			
2	✓			
3	✓			

SECURITY-RELATED ENGINEERED CONTROLS COMMENTS: (Check for condition, damage, signs of security breach)

all good

CAP COMMENTS: (Check for erosion and adequate vegetation)

all good

SURROUNDING AREA COMMENTS: (Check for condition, damage, signs of security breach)

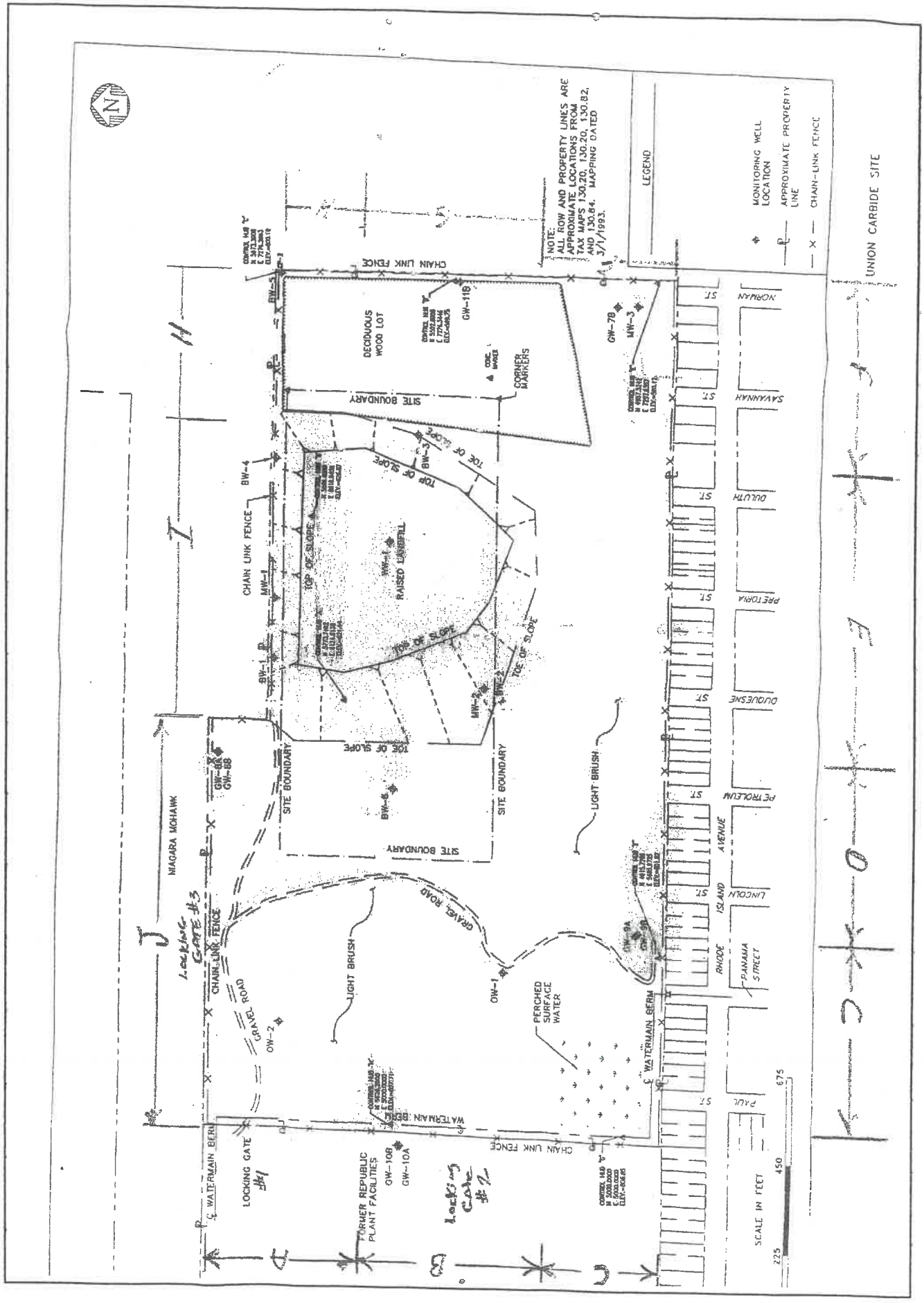
all good

RECORD THE DATE(S) THAT THE ENTIRE CAP WAS MOWED:_____

IN THE EVENT THAT ANY SIGN OF A SITE SECURITY BREACH IS IDENTIFIED DURING THE ABOVE SITE INSPECTIONS, COMPLETE A FULL GROUNDWATER MONITORING WELL INSPECTION AND DOCUMENT RESULTS USING THE QUARTERLY GROUNDWATER WELL INSPECTION REPORT FORM (APPENDIX B) AND ATTACH TO THIS FORM.

John S
Employee

2/20
Date



APPENDIX A - WEEKLY GENERAL LANDFILL AND SITE SECURITY INSPECTION REPORT

Date	Time	Inspector Name
3/1/21	4:00 pm	John Swaterman

FENCE AREA	OK	DAMAGED	REPAIR DATE	REMARKS
A	✓			
B	✓			
C	✓			
D	✓			
E	✓			
F	✓			
G	✓			
H	✓			
I	✓			
J	✓			

GATE	OK	DAMAGED	REPAIR DATE	REMARKS
1	✓			
2	✓			
3	✓			

SECURITY-RELATED ENGINEERED CONTROLS COMMENTS: (Check for condition, damage, signs of security breach)

all good

CAP COMMENTS: (Check for erosion and adequate vegetation)

all good

SURROUNDING AREA COMMENTS: (Check for condition, damage, signs of security breach)

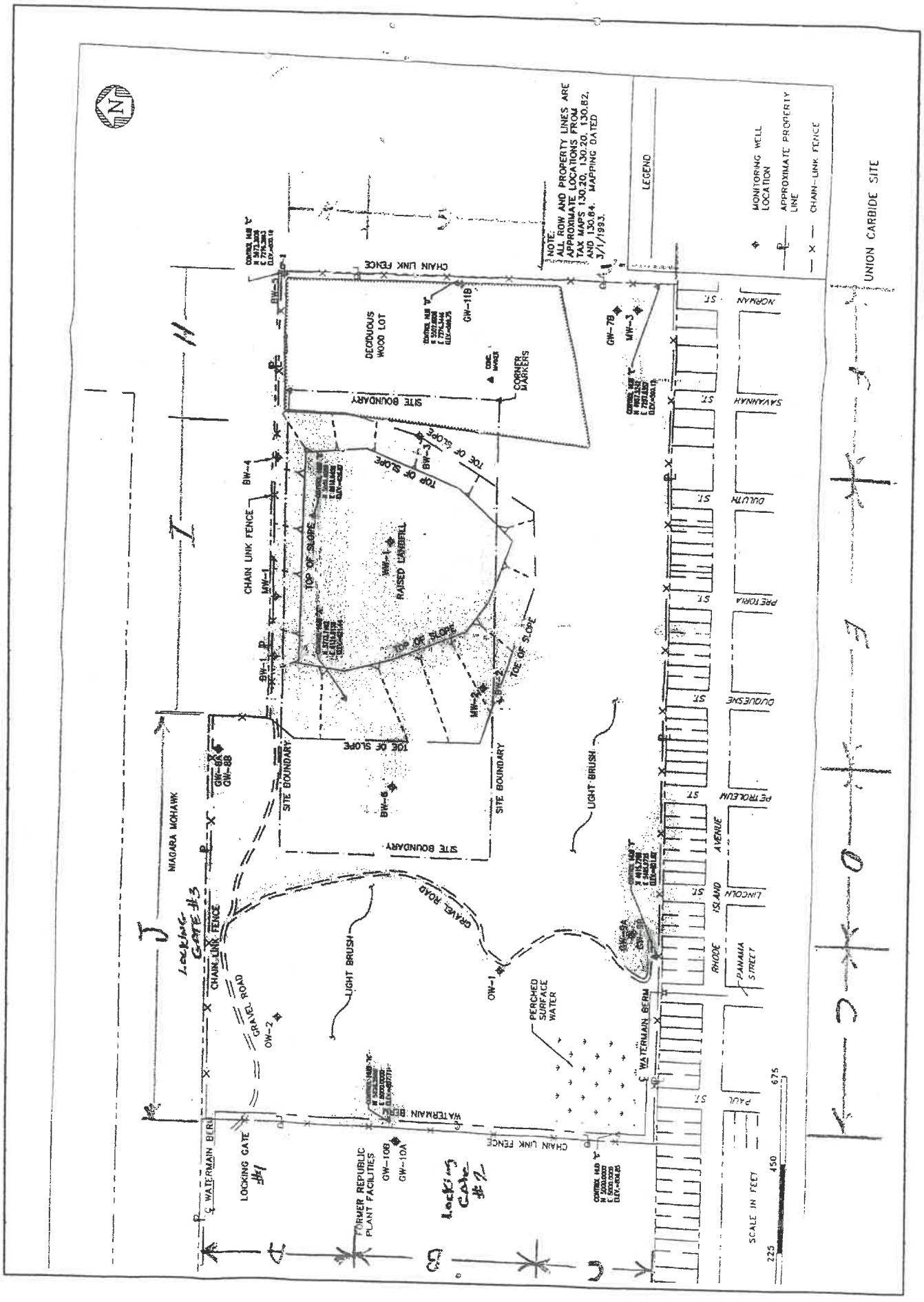
all good

RECORD THE DATE(S) THAT THE ENTIRE CAP WAS MOWED:_____

IN THE EVENT THAT ANY SIGN OF A SITE SECURITY BREACH IS IDENTIFIED DURING THE ABOVE SITE INSPECTIONS, COMPLETE A FULL GROUNDWATER MONITORING WELL INSPECTION AND DOCUMENT RESULTS USING THE QUARTERLY GROUNDWATER WELL INSPECTION REPORT FORM (APPENDIX B) AND ATTACH TO THIS FORM.

John
Employee

3/1
Date



APPENDIX A - WEEKLY GENERAL LANDFILL AND SITE SECURITY INSPECTION REPORT

Date	Time	Inspector Name
3/13/21	1:00	John Swaney

FENCE AREA	OK	DAMAGED	REPAIR DATE	REMARKS
A	✓			
B	✓			
C	✓			
D	✓			
E	✓			
F	✓			
G	✓			
H	✓			
I	✓			
J				

GATE	OK	DAMAGED	REPAIR DATE	REMARKS
1	✓			
2	✓			
3	✓			

RECEIVED MAR 15 2021

SECURITY-RELATED ENGINEERED CONTROLS COMMENTS: (Check for condition, damage, signs of security breach)

all good

CAP COMMENTS: (Check for erosion and adequate vegetation)

all good

SURROUNDING AREA COMMENTS: (Check for condition, damage, signs of security breach)

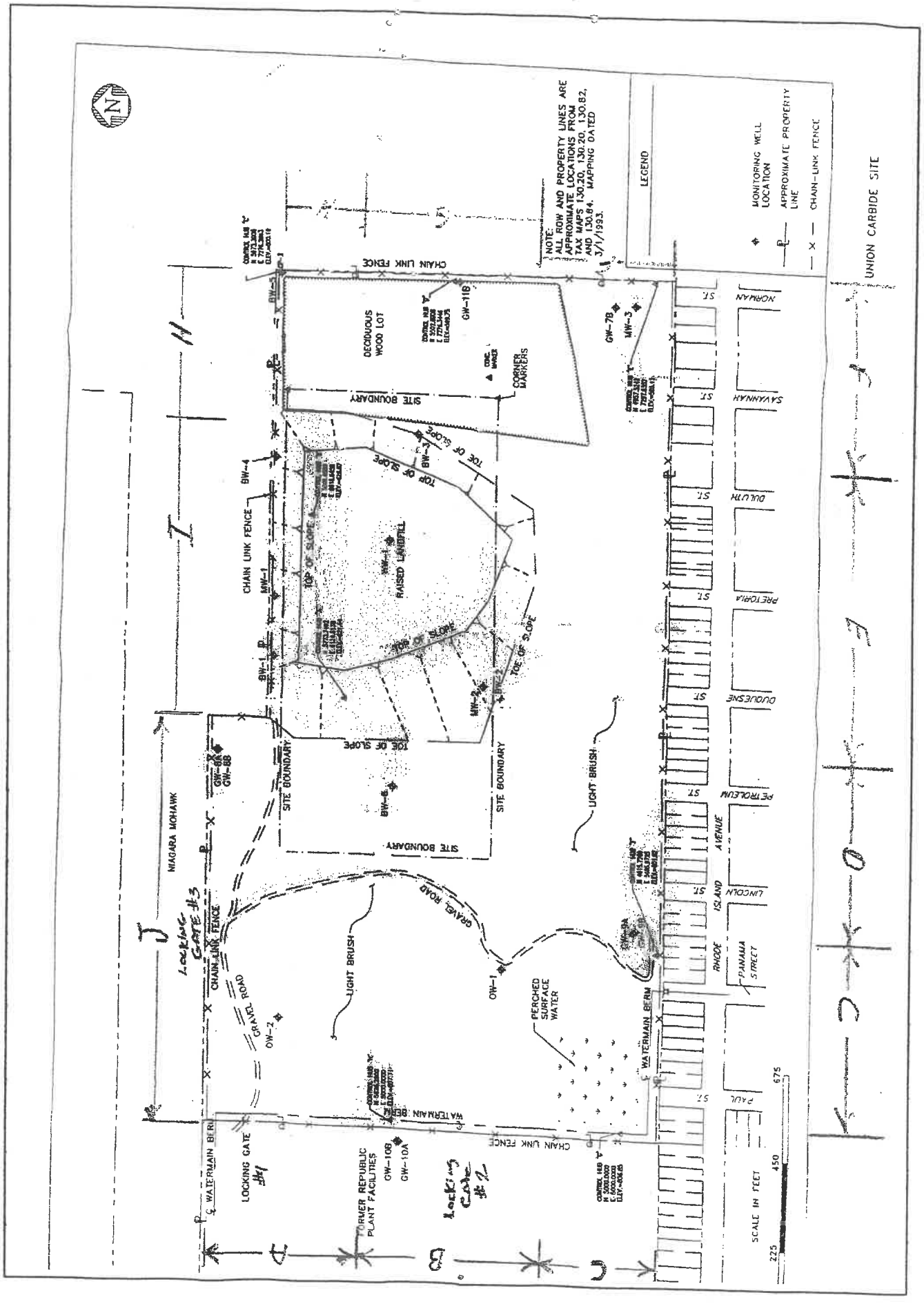
all good

RECORD THE DATE(S) THAT THE ENTIRE CAP WAS MOWED: _____

IN THE EVENT THAT ANY SIGN OF A SITE SECURITY BREACH IS IDENTIFIED DURING THE ABOVE SITE INSPECTIONS, COMPLETE A FULL GROUNDWATER MONITORING WELL INSPECTION AND DOCUMENT RESULTS USING THE QUARTERLY GROUNDWATER WELL INSPECTION REPORT FORM (APPENDIX B) AND ATTACH TO THIS FORM.

John
Employee

3/13
Date



APPENDIX A - WEEKLY GENERAL LANDFILL AND SITE SECURITY INSPECTION REPORT

Date	Time	Inspector Name
3/20/21	9:00 Am	John Swearengen

FENCE AREA	OK	DAMAGED	REPAIR DATE	REMARKS
A	✓			
B	✓			
C	✓			
D	✓			
E	✓			
F	✓			
G	✓			
H	✓			
I	✓			
J	✓			

GATE	OK	DAMAGED	REPAIR DATE	REMARKS
1	✓			
2	✓			
3	✓			

SECURITY-RELATED ENGINEERED CONTROLS COMMENTS: (Check for condition, damage, signs of security breach)

all good

CAP COMMENTS: (Check for erosion and adequate vegetation)

all good

SURROUNDING AREA COMMENTS: (Check for condition, damage, signs of security breach)

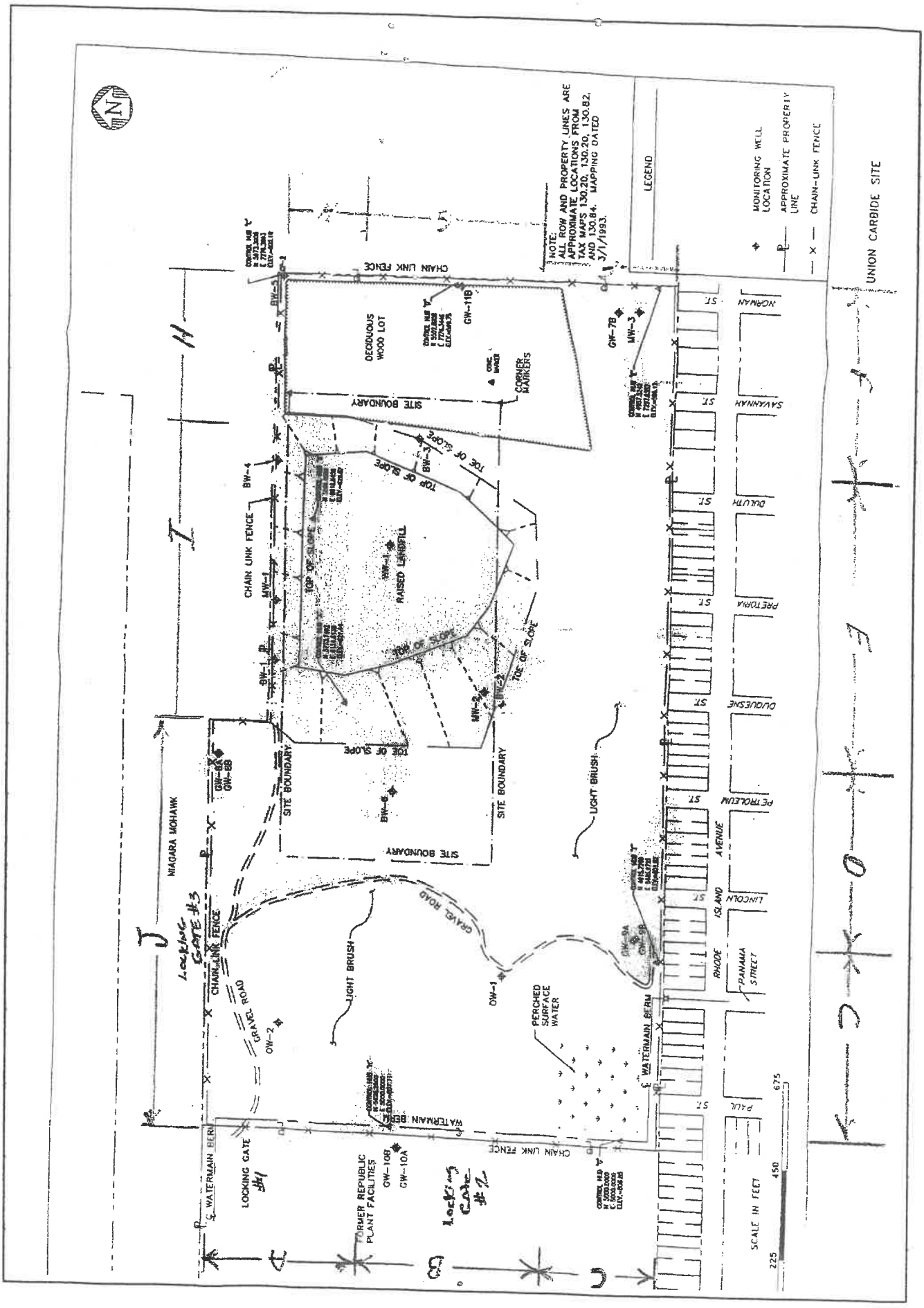
all good

RECORD THE DATE(S) THAT THE ENTIRE CAP WAS MOWED:_____

IN THE EVENT THAT ANY SIGN OF A SITE SECURITY BREACH IS IDENTIFIED DURING THE ABOVE SITE INSPECTIONS, COMPLETE A FULL GROUNDWATER MONITORING WELL INSPECTION AND DOCUMENT RESULTS USING THE QUARTERLY GROUNDWATER WELL INSPECTION REPORT FORM (APPENDIX B) AND ATTACH TO THIS FORM.

Employee

3/20
Date



APPENDIX A - WEEKLY GENERAL LANDFILL AND SITE SECURITY INSPECTION REPORT

Date	Time	Inspector Name
3/20/21	7:00	John Swango

FENCE AREA	OK	DAMAGED	REPAIR DATE	REMARKS
A	✓			
B	✓			
C	✓			
D	✓			
E	✓			
F	✓			
G	✓			
H		fallen Branches		
I	✓			
J	✓			

GATE	OK	DAMAGED	REPAIR DATE	REMARKS
1	✓			
2	✓			
3	✓			

SECURITY-RELATED ENGINEERED CONTROLS COMMENTS: (Check for condition, damage, signs of security breach)

all good

CAP COMMENTS: (Check for erosion and adequate vegetation)

all good

SURROUNDING AREA COMMENTS: (Check for condition, damage, signs of security breach)

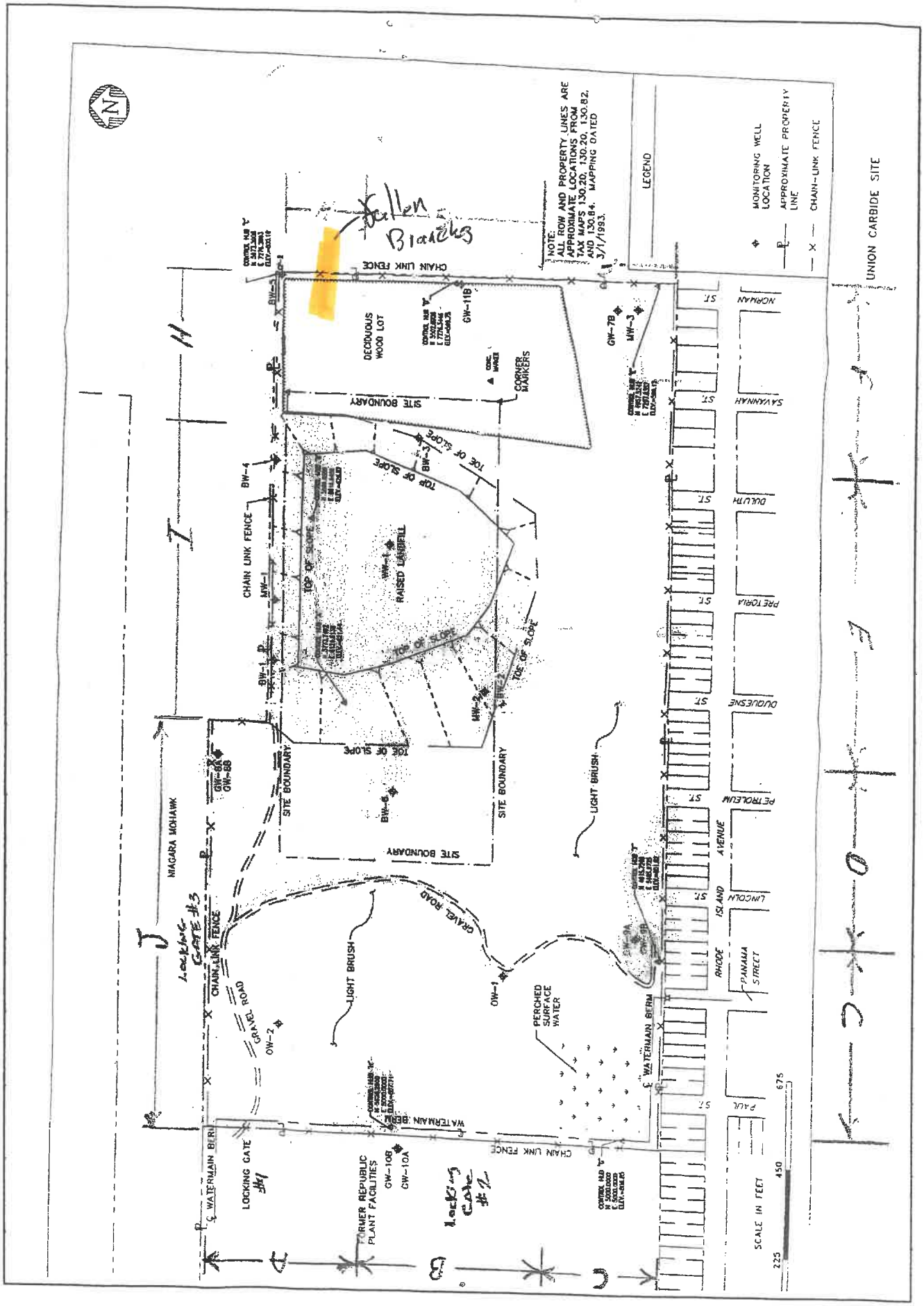
fallen Branches Blocking Path

RECORD THE DATE(S) THAT THE ENTIRE CAP WAS MOWED: _____

IN THE EVENT THAT ANY SIGN OF A SITE SECURITY BREACH IS IDENTIFIED DURING THE ABOVE SITE INSPECTIONS, COMPLETE A FULL GROUNDWATER MONITORING WELL INSPECTION AND DOCUMENT RESULTS USING THE QUARTERLY GROUNDWATER WELL INSPECTION REPORT FORM (APPENDIX B) AND ATTACH TO THIS FORM.

John
Employee

3/29
Date



APPENDIX A - WEEKLY GENERAL LANDFILL AND SITE SECURITY INSPECTION REPORT

Date	Time	Inspector Name
4/7/21	3:30	John Sweeney

FENCE AREA	OK	DAMAGED	REPAIR DATE	REMARKS
A	✓			
B	✓			
C	✓			
D	✓			
E	✓			
F	✓			
G	✓			
H				fallen branches
I	✓			
J	✓			

GATE	OK	DAMAGED	REPAIR DATE	REMARKS
1	✓			
2	✓			
3				

SECURITY-RELATED ENGINEERED CONTROLS COMMENTS: (Check for condition, damage, signs of security breach)

all good

CAP COMMENTS: (Check for erosion and adequate vegetation)

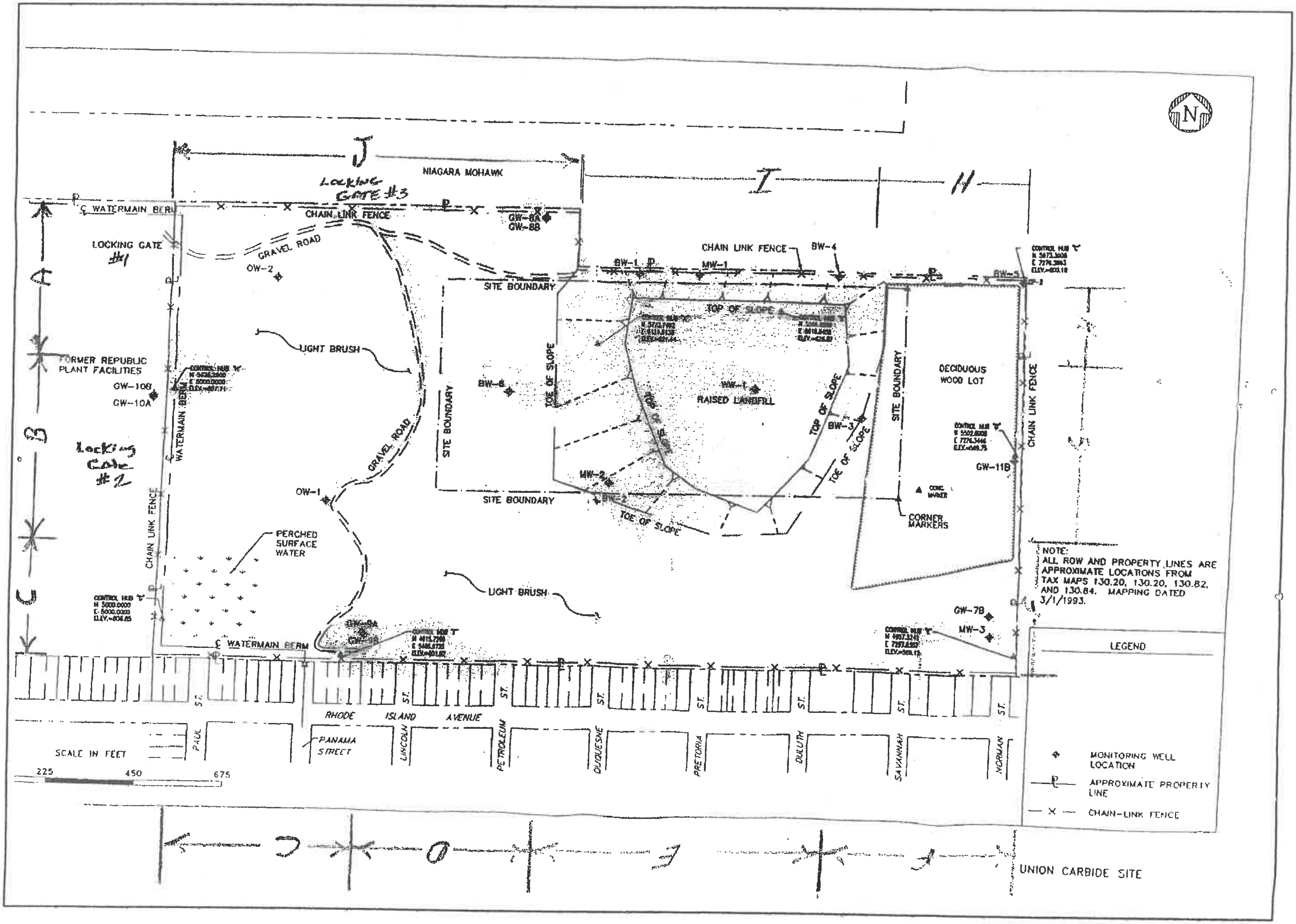
all good

SURROUNDING AREA COMMENTS: (Check for condition, damage, signs of security breach)

all good

RECORD THE DATE(S) THAT THE ENTIRE CAP WAS MOWED: _____

IN THE EVENT THAT ANY SIGN OF A SITE SECURITY BREACH IS IDENTIFIED DURING THE ABOVE SITE INSPECTIONS, COMPLETE A FULL GROUNDWATER MONITORING WELL INSPECTION AND DOCUMENT RESULTS USING THE QUARTERLY GROUNDWATER WELL INSPECTION REPORT FORM (APPENDIX B) AND ATTACH TO THIS FORM.



John S
Employee

Date 4/7

APPENDIX A - WEEKLY GENERAL LANDFILL AND SITE SECURITY INSPECTION REPORT

Date	Time	Inspector Name
4/10/21	4:00	John Secondaye

ENCE ARE.	OK	DAMAGED	REPAIR DATE	REMARKS
A	✓			
B	✓			
C	✓			
D	✓			
E	✓			
F	✓			
G	✓			
H	✓			
I	✓			
J	✓			

GATE	OK	DAMAGED	REPAIR DATE	REMARKS
1	✓			
2	✓			
3	✓			

SECURITY-RELATED ENGINEERED CONTROLS COMMENTS: (Check for condition, damage, signs of security breach)

all good

CAP COMMENTS: (Check for erosion and adequate vegetation)

all good

SURROUNDING AREA COMMENTS: (Check for condition, damage, signs of security breach)

all good

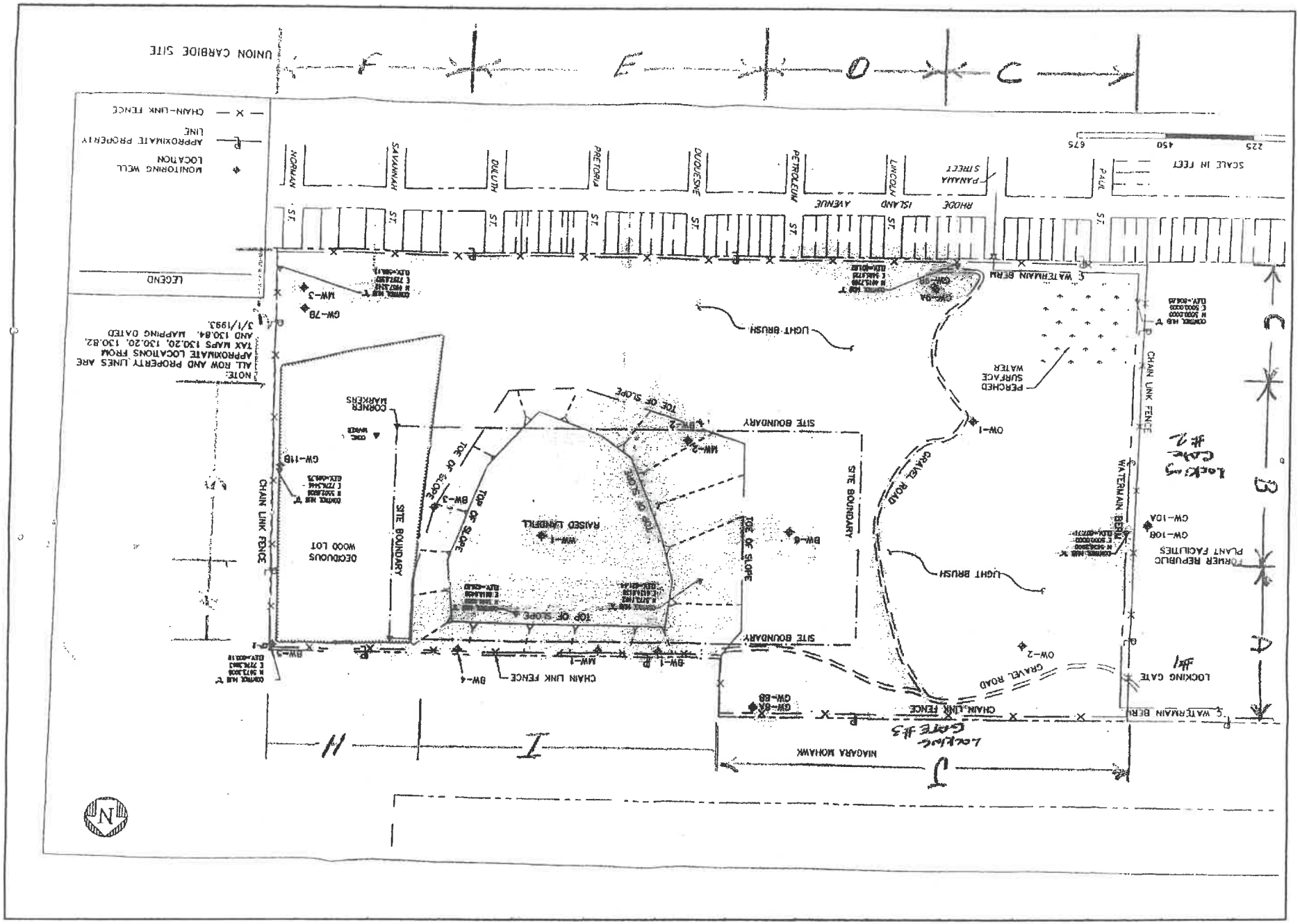
RECORD THE DATE(S) THAT THE ENTIRE CAP WAS MOWED:_____

IN THE EVENT THAT ANY SIGN OF A SITE SECURITY BREACH IS IDENTIFIED DURING THE ABOVE SITE INSPECTIONS, COMPLETE A FULL GROUNDWATER MONITORING WELL INSPECTION AND DOCUMENT RESULTS USING THE QUARTERLY GROUNDWATER WELL INSPECTION REPORT FORM (APPENDIX B) AND ATTACH TO THIS FORM.

Date 4/16

Job 2

Employee



APPENDIX A - WEEKLY GENERAL LANDFILL AND SITE SECURITY INSPECTION REPORT

Date	Time	Inspector Name
6/22/21	4:00 [illegible]	John Sweeney

FENCE AREA	OK	DAMAGED	REPAIR DATE	REMARKS
A	✓			
B	✓			
C	✓			
D	✓			
E	✓			
F	✓			
G	✓			
H	✓			
I	✓			
J	✓			

GATE	OK	DAMAGED	REPAIR DATE	REMARKS
1	✓			
2	✓			
3	✓			

SECURITY-RELATED ENGINEERED CONTROLS COMMENTS: (Check for condition, damage, signs of security breach)

all good

CAP COMMENTS: (Check for erosion and adequate vegetation)

all good

SURROUNDING AREA COMMENTS: (Check for condition, damage, signs of security breach)

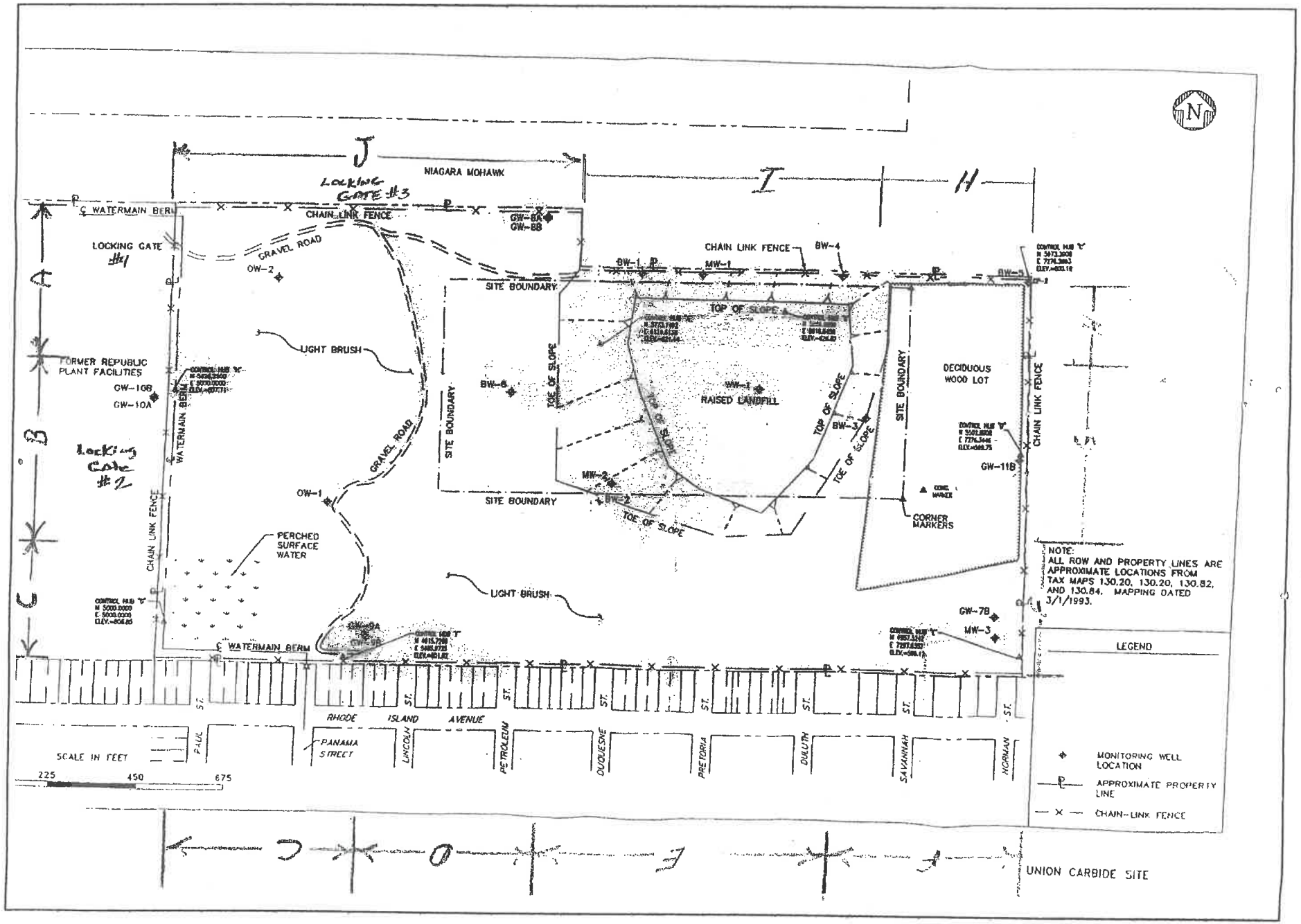
all good

RECORD THE DATE(S) THAT THE ENTIRE CAP WAS MOWED: _____

IN THE EVENT THAT ANY SIGN OF A SITE SECURITY BREACH IS IDENTIFIED DURING THE ABOVE SITE INSPECTIONS, COMPLETE A FULL GROUNDWATER MONITORING WELL INSPECTION AND DOCUMENT RESULTS USING THE QUARTERLY GROUNDWATER WELL INSPECTION REPORT FORM (APPENDIX B) AND ATTACH TO THIS FORM.

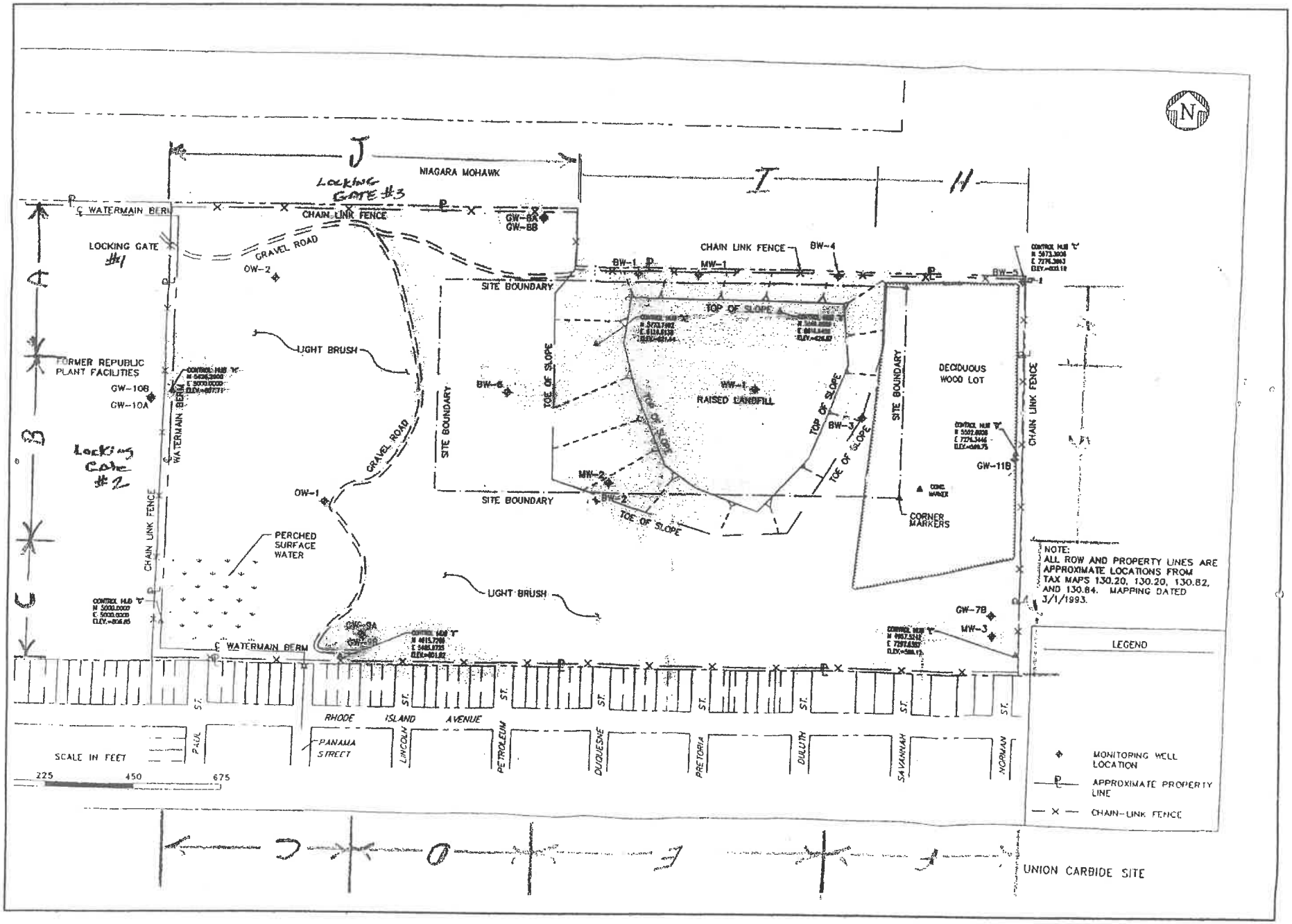
Employee Johns

Date 4/23



Employee Josh

Date 4/28/21



APPENDIX A - WEEKLY GENERAL LANDFILL AND SITE SECURITY INSPECTION REPORT

Date	Time	Inspector Name
4/29/2021	10:00	Josh

ENCE ARE	OK	DAMAGED	REPAIR DATE	REMARKS
A	✓			
B	✓			
C	✓			
D	✓			
E	✓			
F	✓			
G	✓			
H	✓			
I	✓			
J				

GATE	OK	DAMAGED	REPAIR DATE	REMARKS
1	✓			
2	✓			
3	✓			

SECURITY-RELATED ENGINEERED CONTROLS COMMENTS: (Check for condition, damage, signs of security breach)

good

CAP COMMENTS: (Check for erosion and adequate vegetation)

good

SURROUNDING AREA COMMENTS: (Check for condition, damage, signs of security breach)

good

RECORD THE DATE(S) THAT THE ENTIRE CAP WAS MOWED:_____

IN THE EVENT THAT ANY SIGN OF A SITE SECURITY BREACH IS IDENTIFIED DURING THE ABOVE SITE INSPECTIONS, COMPLETE A FULL GROUNDWATER MONITORING WELL INSPECTION AND DOCUMENT RESULTS USING THE QUARTERLY GROUNDWATER WELL INSPECTION REPORT FORM (APPENDIX B) AND ATTACH TO THIS FORM.

APPENDIX A - WEEKLY GENERAL LANDFILL AND SITE SECURITY INSPECTION REPORT

Date	Time	Inspector Name
5/6/21	4:30	John Scrocca

ENCE ARE	OK	DAMAGED	REPAIR DATE	REMARKS
A	✓			
B	✓			
C	✓			
D	✓			
E	✓			
F	✓			
G	✓			
H	✓	X		tree
I	✓			
J				

GATE	OK	DAMAGED	REPAIR DATE	REMARKS
1	✓			
2	✓			
3	✓			

SECURITY-RELATED ENGINEERED CONTROLS COMMENTS: (Check for condition, damage, signs of security breach)

all good

CAP COMMENTS: (Check for erosion and adequate vegetation)

all good

SURROUNDING AREA COMMENTS: (Check for condition, damage, signs of security breach)

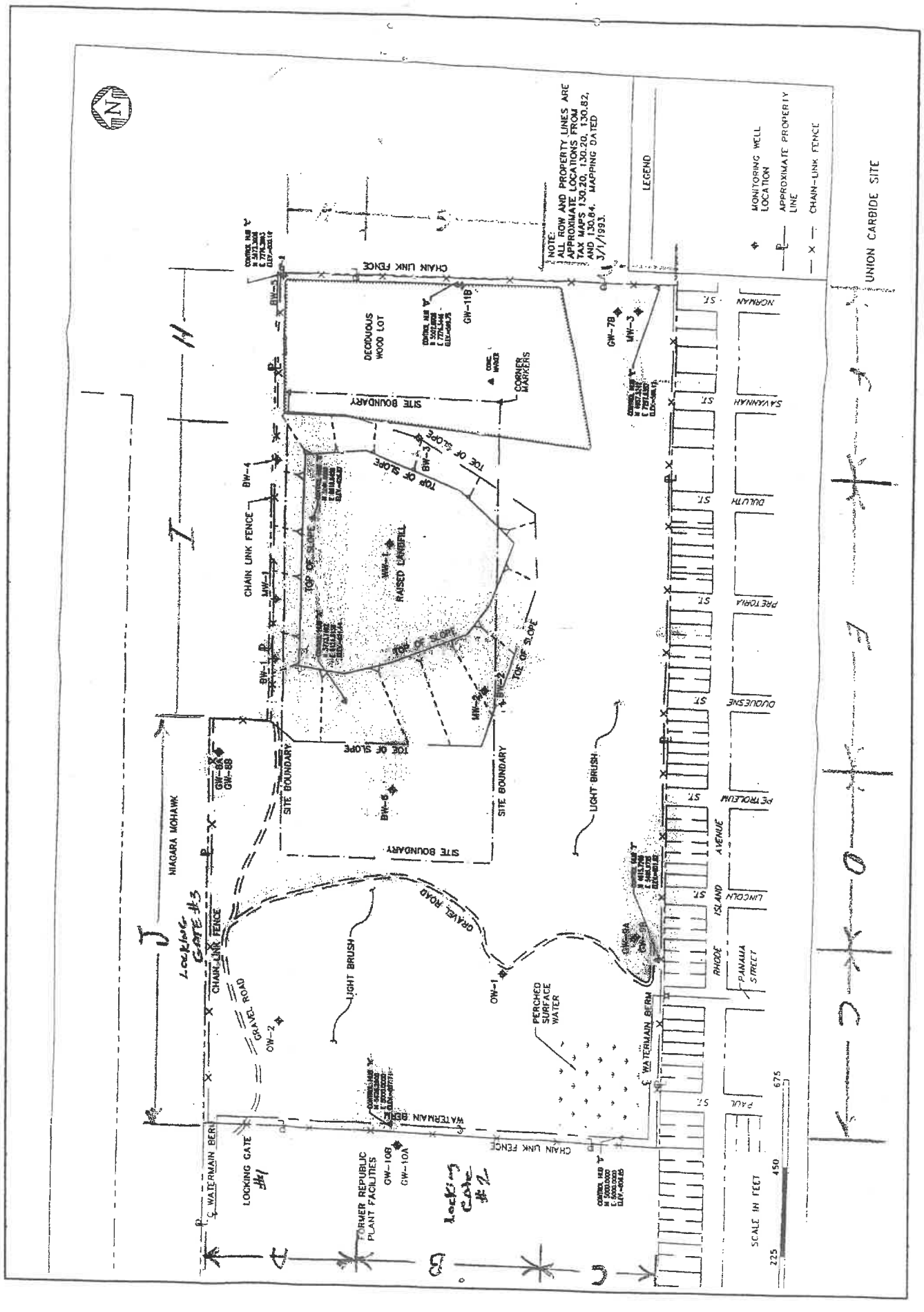
all good

RECORD THE DATE(S) THAT THE ENTIRE CAP WAS MOWED:_____

IN THE EVENT THAT ANY SIGN OF A SITE SECURITY BREACH IS IDENTIFIED DURING THE ABOVE SITE INSPECTIONS, COMPLETE A FULL GROUNDWATER MONITORING WELL INSPECTION AND DOCUMENT RESULTS USING THE QUARTERLY GROUNDWATER WELL INSPECTION REPORT FORM (APPENDIX B) AND ATTACH TO THIS FORM.

John
Employee

5/4
Date



APPENDIX A - WEEKLY GENERAL LANDFILL AND SITE SECURITY INSPECTION REPORT

Date	Time	Inspector Name
5/10/21	4:00	John Sweeney

FENCE AREA	OK	DAMAGED	REPAIR DATE	REMARKS
A	✓			
B	✓			
C	✓			
D	✓			
E	✓			
F	✓			
G	✓			
H	✓	✓		tree.
I	✓			
J	✓			

GATE	OK	DAMAGED	REPAIR DATE	REMARKS
1	✓			
2	✓			
3	✓			

SECURITY-RELATED ENGINEERED CONTROLS COMMENTS: (Check for condition, damage, signs of security breach)

all good

CAP COMMENTS: (Check for erosion and adequate vegetation)

all good

SURROUNDING AREA COMMENTS: (Check for condition, damage, signs of security breach)

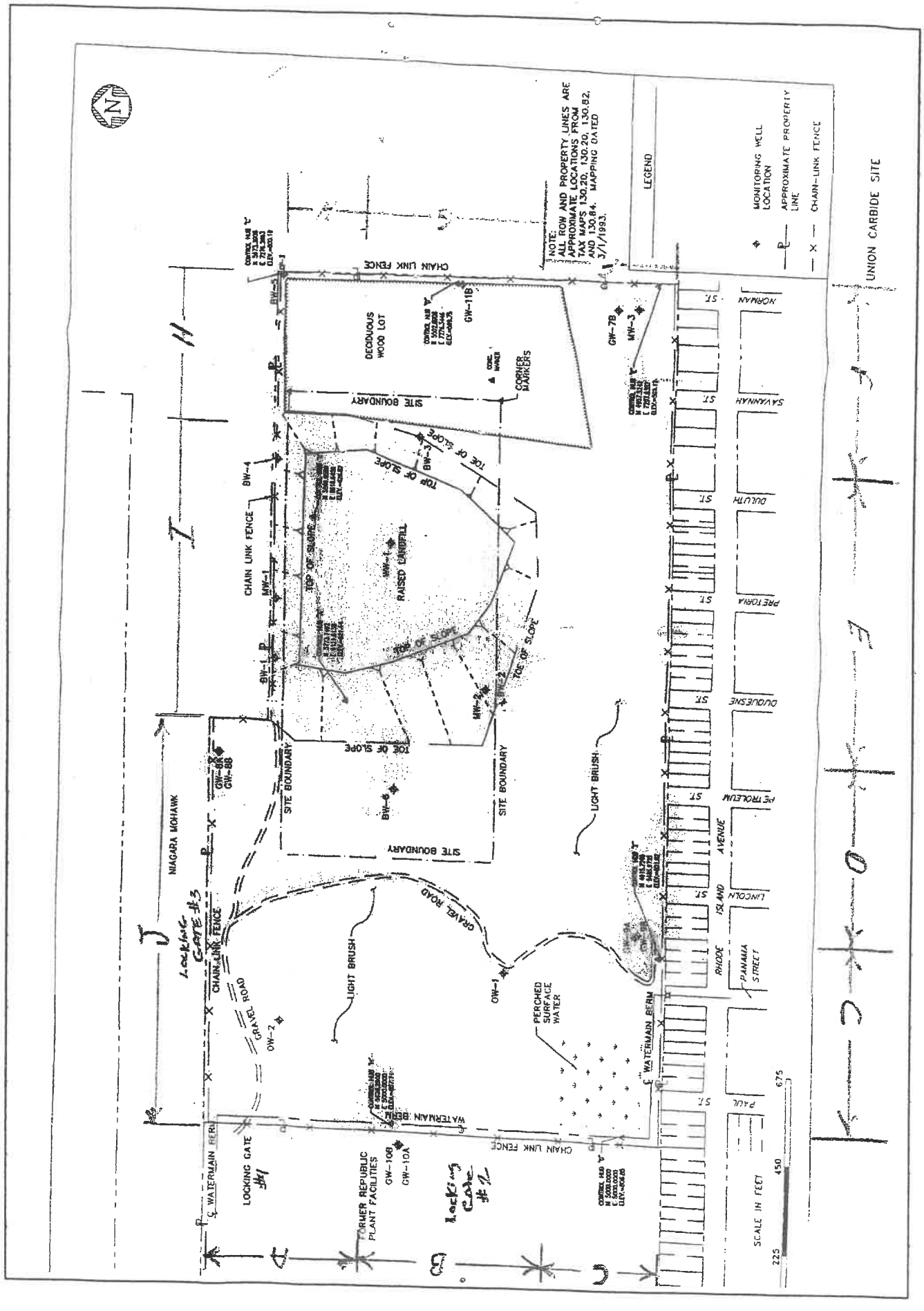
all good

RECORD THE DATE(S) THAT THE ENTIRE CAP WAS MOWED:_____

IN THE EVENT THAT ANY SIGN OF A SITE SECURITY BREACH IS IDENTIFIED DURING THE ABOVE SITE INSPECTIONS, COMPLETE A FULL GROUNDWATER MONITORING WELL INSPECTION AND DOCUMENT RESULTS USING THE QUARTERLY GROUNDWATER WELL INSPECTION REPORT FORM (APPENDIX B) AND ATTACH TO THIS FORM.

John S
Employee

5/10/21
Date



APPENDIX A - WEEKLY GENERAL LANDFILL AND SITE SECURITY INSPECTION REPORT

Date	Time	Inspector Name
5/15/21	7:00 am	John Sevalonga

ENCE ARE	OK	DAMAGED	REPAIR DATE	REMARKS
A	✓			
B	✓			
C	✓			
D	✓			
E	✓			
F	✓			
G	✓			
H	✓	X		tree
I	✓			
J	✓			

GATE	OK	DAMAGED	REPAIR DATE	REMARKS
1	✓			
2	✓			
3	✓			

SECURITY-RELATED ENGINEERED CONTROLS COMMENTS: (Check for condition, damage, signs of security breach)

all good

CAP COMMENTS: (Check for erosion and adequate vegetation)

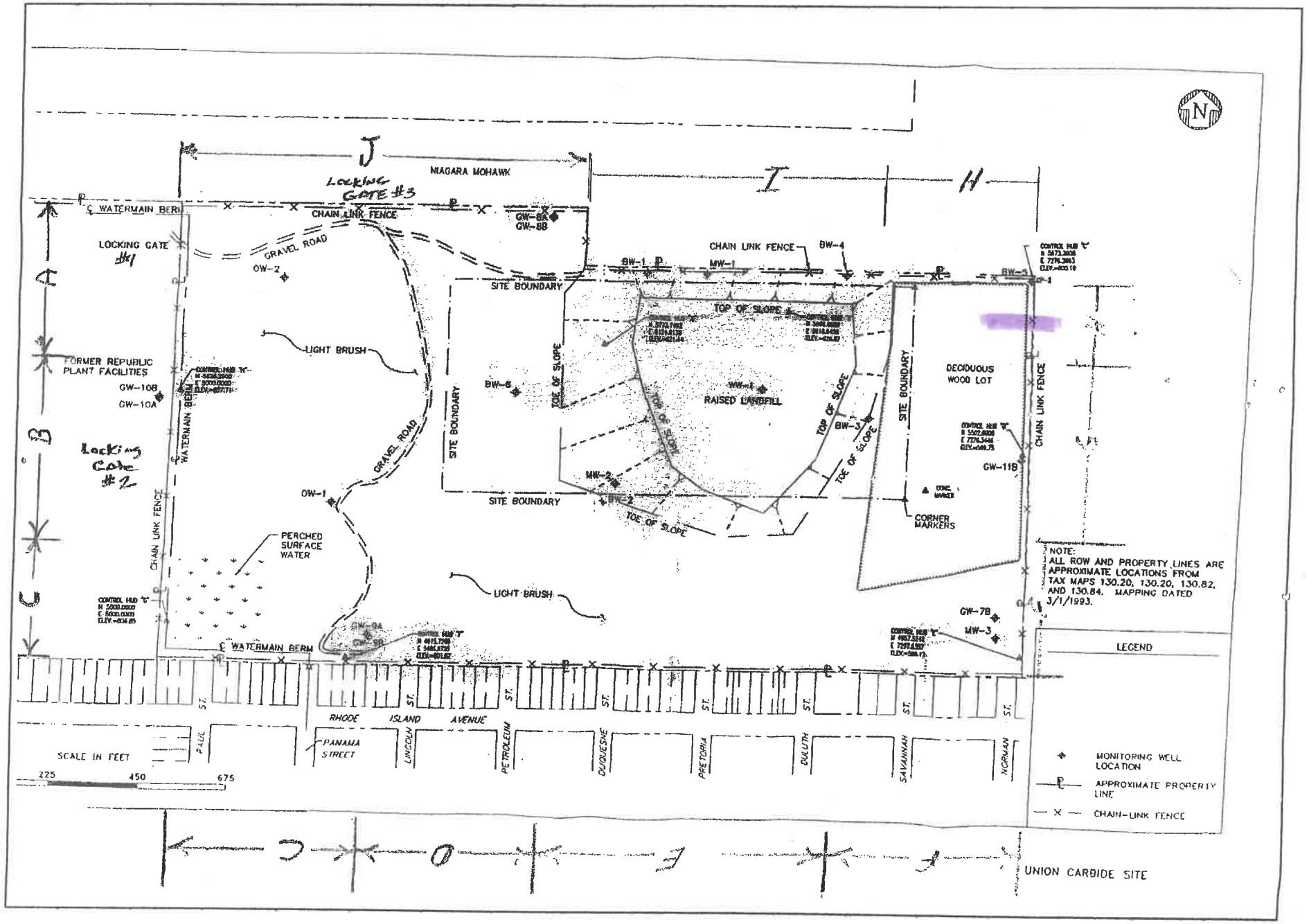
all good

SURROUNDING AREA COMMENTS: (Check for condition, damage, signs of security breach)

all good

RECORD THE DATE(S) THAT THE ENTIRE CAP WAS MOWED:_____

IN THE EVENT THAT ANY SIGN OF A SITE SECURITY BREACH IS IDENTIFIED DURING THE ABOVE SITE INSPECTIONS, COMPLETE A FULL GROUNDWATER MONITORING WELL INSPECTION AND DOCUMENT RESULTS USING THE QUARTERLY GROUNDWATER WELL INSPECTION REPORT FORM (APPENDIX B) AND ATTACH TO THIS FORM.



John S
Employee

5/15
Date

APPENDIX A - WEEKLY GENERAL LANDFILL AND SITE SECURITY INSPECTION REPORT

Date	Time	Inspector Name
5/25/21	6:30	John Svecdaly

FENCE AREA	OK	DAMAGED	REPAIR DATE	REMARKS
A	✓			
B	✓			
C	✓			
D	✓			
E	✓			
F	✓			
G	✓			
H	✓			
I	✓			
J	✓			

GATE	OK	DAMAGED	REPAIR DATE	REMARKS
1	✓			
2	✓			
3	✓			

SECURITY-RELATED ENGINEERED CONTROLS COMMENTS: (Check for condition, damage, signs of security breach)

all good

CAP COMMENTS: (Check for erosion and adequate vegetation)

all good

SURROUNDING AREA COMMENTS: (Check for condition, damage, signs of security breach)

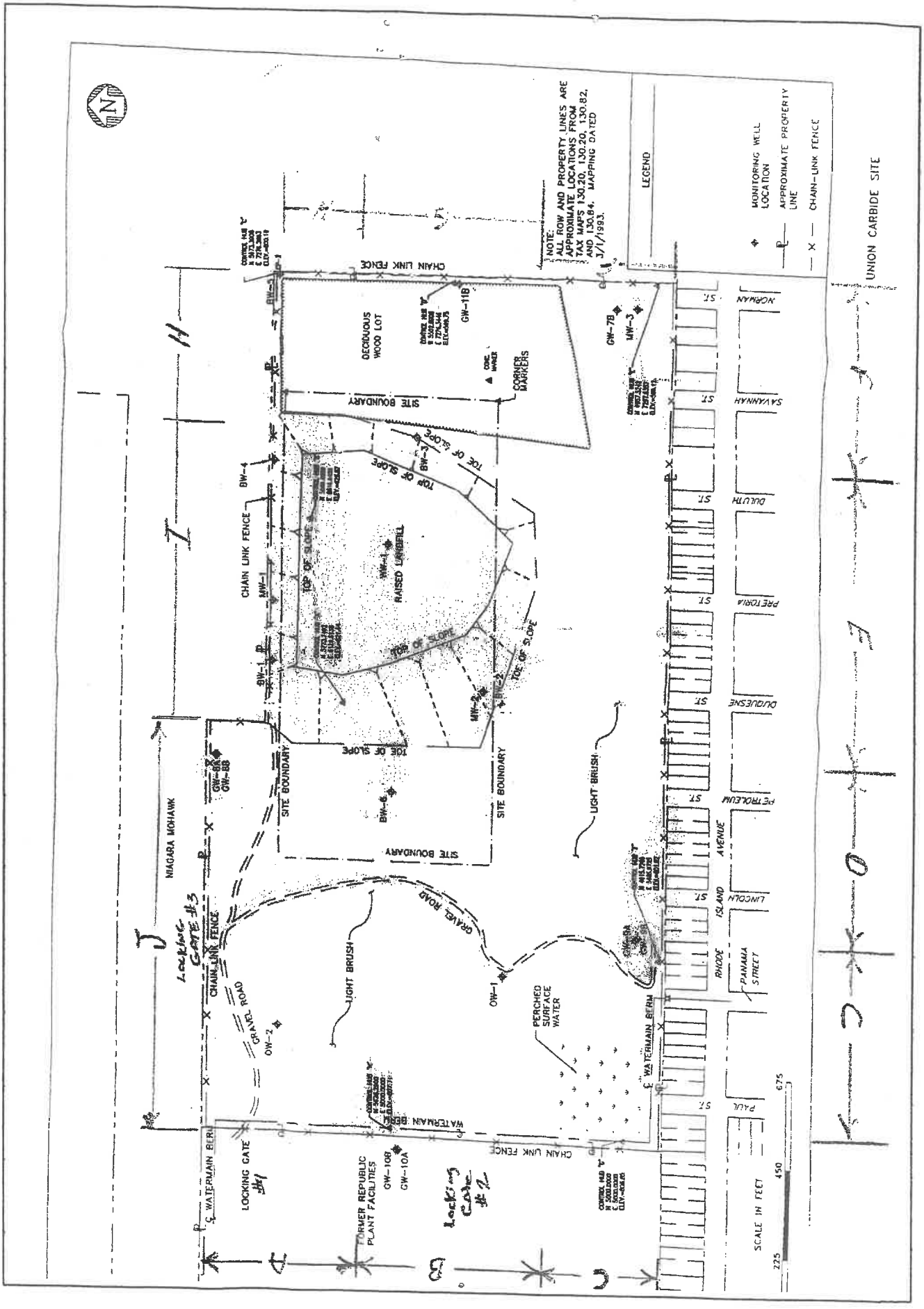
all good

RECORD THE DATE(S) THAT THE ENTIRE CAP WAS MOWED:________________

IN THE EVENT THAT ANY SIGN OF A SITE SECURITY BREACH IS IDENTIFIED DURING THE ABOVE SITE INSPECTIONS, COMPLETE A FULL GROUNDWATER MONITORING WELL INSPECTION AND DOCUMENT RESULTS USING THE QUARTERLY GROUNDWATER WELL INSPECTION REPORT FORM (APPENDIX B) AND ATTACH TO THIS FORM.

John S
Employee

5/25/202
Date



APPENDIX A - WEEKLY GENERAL LANDFILL AND SITE SECURITY INSPECTION REPORT

Date	Time	Inspector Name
5/30/21	7:30	John Sweeney

ENCE ARE	OK	DAMAGED	REPAIR DATE	REMARKS
A	✓			
B	✓			
C	✓			
D	✓			
E	✓			
F	✓			
G	✓			
H	✓			
I	✓			
J	✓			

GATE	OK	DAMAGED	REPAIR DATE	REMARKS
1	✓			
2	✓			
3	✓			

SECURITY-RELATED ENGINEERED CONTROLS COMMENTS: (Check for condition, damage, signs of security breach)

all good

CAP COMMENTS: (Check for erosion and adequate vegetation)

all good

SURROUNDING AREA COMMENTS: (Check for condition, damage, signs of security breach)

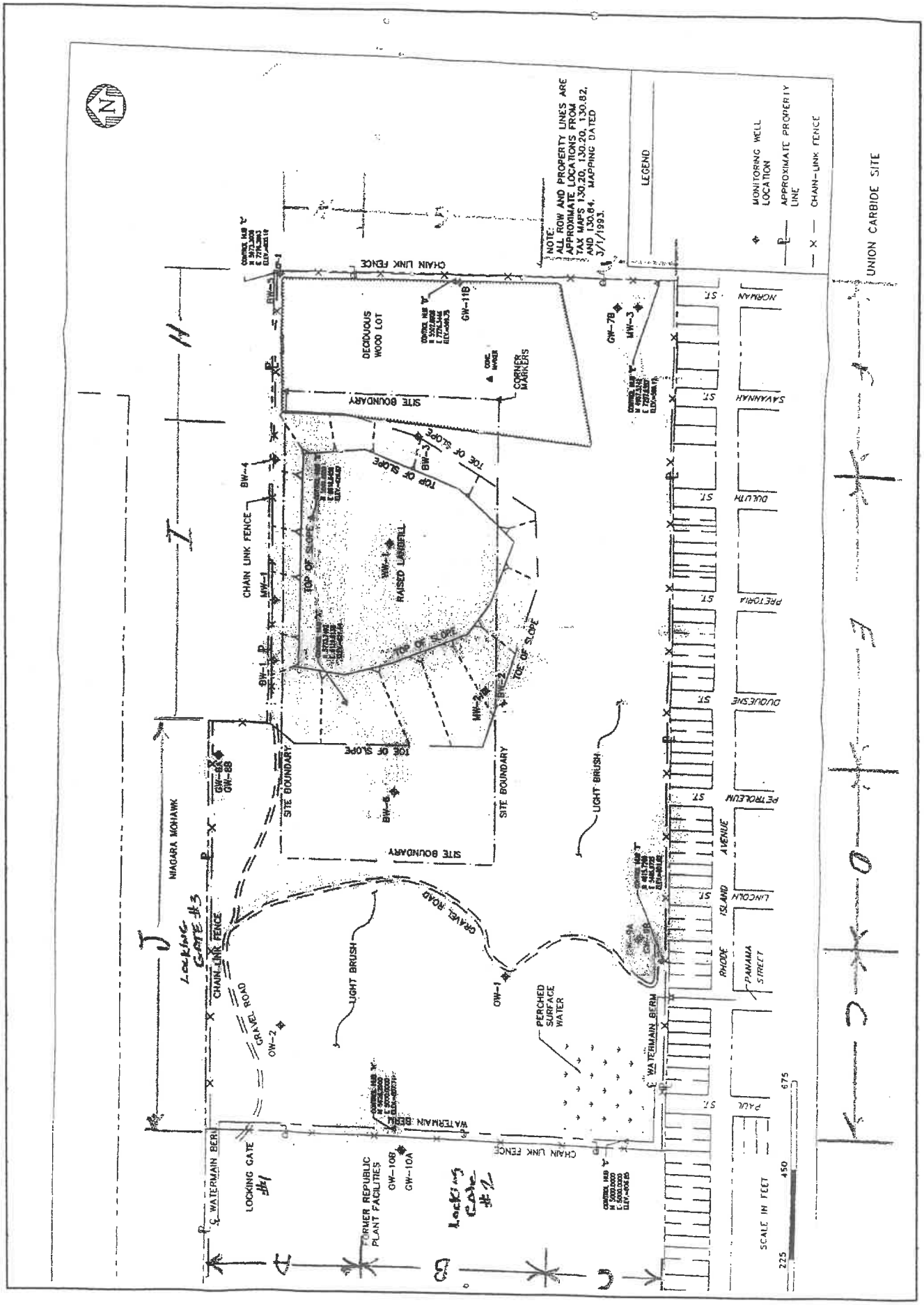
all good

RECORD THE DATE(S) THAT THE ENTIRE CAP WAS MOWED: _____

IN THE EVENT THAT ANY SIGN OF A SITE SECURITY BREACH IS IDENTIFIED DURING THE ABOVE SITE INSPECTIONS, COMPLETE A FULL GROUNDWATER MONITORING WELL INSPECTION AND DOCUMENT RESULTS USING THE QUARTERLY GROUNDWATER WELL INSPECTION REPORT FORM (APPENDIX B) AND ATTACH TO THIS FORM.

John S
Employee

5/30/21
Date



APPENDIX A - WEEKLY GENERAL LANDFILL AND SITE SECURITY INSPECTION REPORT

Date	Time	Inspector Name
6/5/21	7:00 Am	John Sweeney

FENCE AREA	OK	DAMAGED	REPAIR DATE	REMARKS
A	✓			
B	✓			
C	✓			
D	✓			
E	✓			
F	✓			
G	✓			
H	✓			
I	✓			
J	✓			

GATE	OK	DAMAGED	REPAIR DATE	REMARKS
1	✓			
2	✓			
3	✓			

SECURITY-RELATED ENGINEERED CONTROLS COMMENTS: (Check for condition, damage, signs of security breach)

all good

CAP COMMENTS: (Check for erosion and adequate vegetation)

all good

SURROUNDING AREA COMMENTS: (Check for condition, damage, signs of security breach)

all good

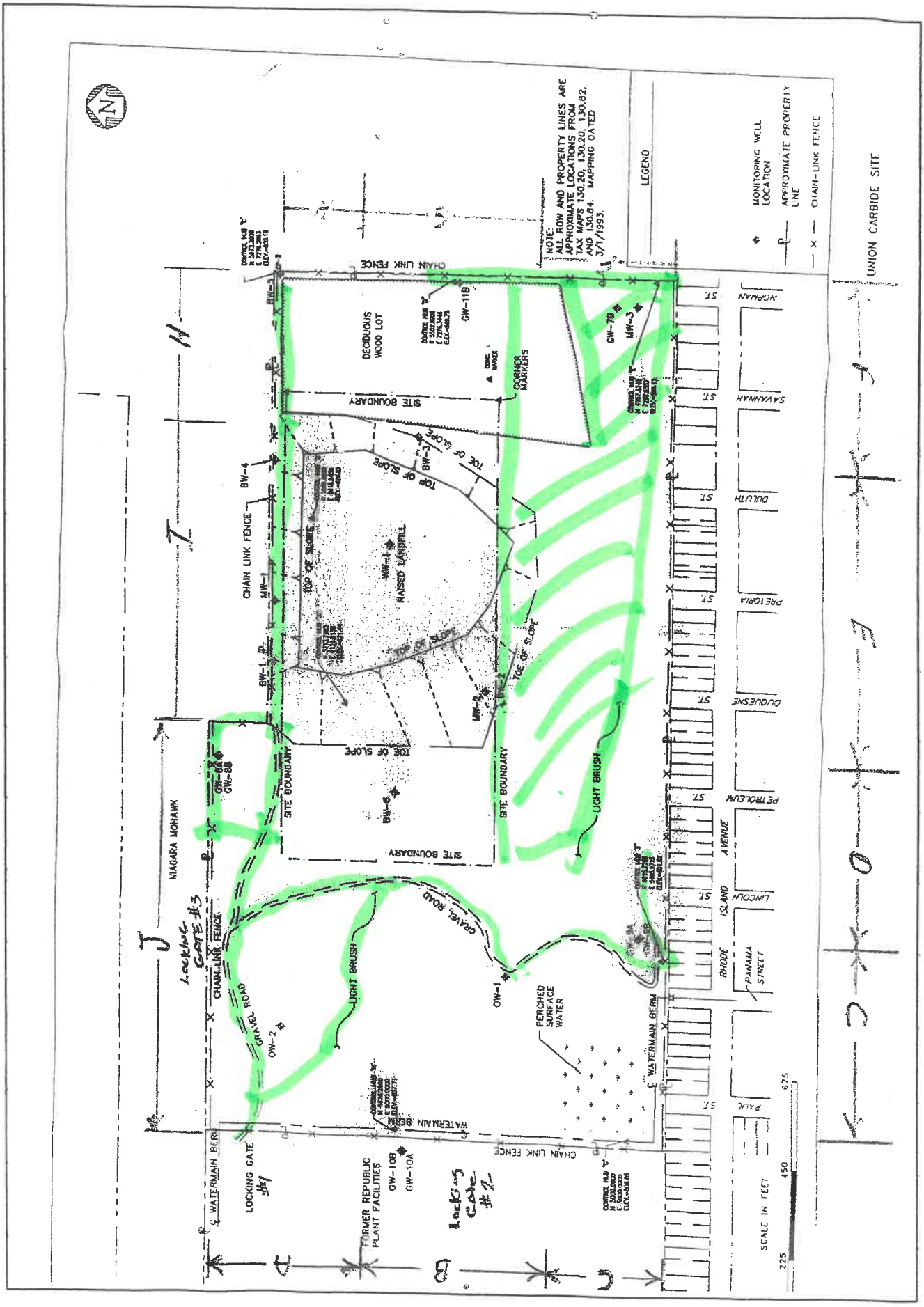
RECORD THE DATE(S) THAT THE ENTIRE CAP WAS MOWED:_____

IN THE EVENT THAT ANY SIGN OF A SITE SECURITY BREACH IS IDENTIFIED DURING THE ABOVE SITE INSPECTIONS, COMPLETE A FULL GROUNDWATER MONITORING WELL INSPECTION AND DOCUMENT RESULTS USING THE QUARTERLY GROUNDWATER WELL INSPECTION REPORT FORM (APPENDIX B) AND ATTACH TO THIS FORM.

John Serum
Employee

= cut grass

6/5/24
Date



APPENDIX A - WEEKLY GENERAL LANDFILL AND SITE SECURITY INSPECTION REPORT

Date	Time	Inspector Name
6/19/21	11:00	[illegible]

FENCE AREA	OK	DAMAGED	REPAIR DATE	REMARKS
A	✓			
B	✓			
C	✓			
D	✓			
E	✓			
F	✓			
G	✓			
H	✓			
I	✓			
J	✓			

GATE	OK	DAMAGED	REPAIR DATE	REMARKS
1	✓			
2	✓			
3	✓			

SECURITY-RELATED ENGINEERED CONTROLS COMMENTS: (Check for condition, damage, signs of security breach)

all good

CAP COMMENTS: (Check for erosion and adequate vegetation)

all good

SURROUNDING AREA COMMENTS: (Check for condition, damage, signs of security breach)

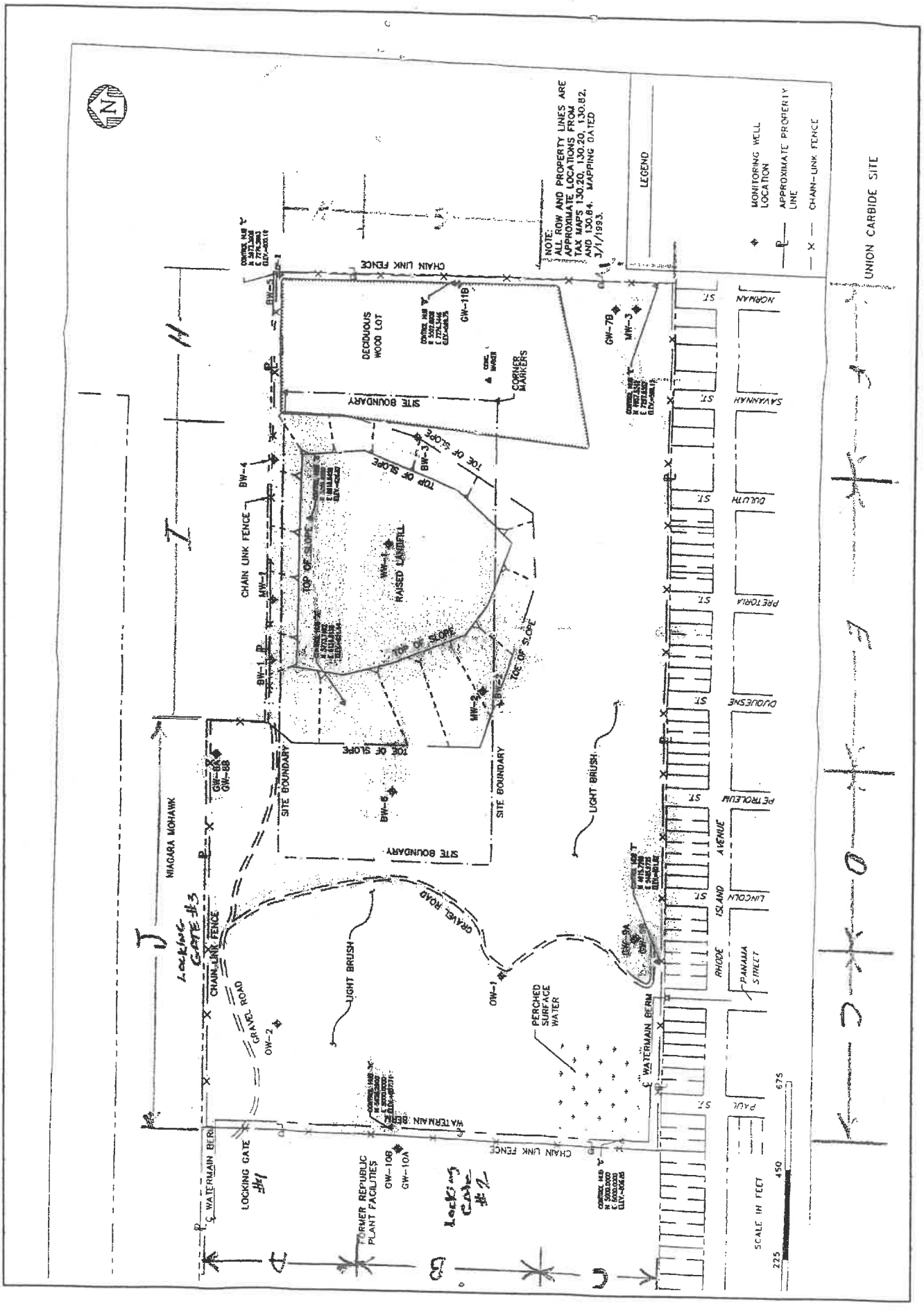
all good

RECORD THE DATE(S) THAT THE ENTIRE CAP WAS MOWED: 6/5

IN THE EVENT THAT ANY SIGN OF A SITE SECURITY BREACH IS IDENTIFIED DURING THE ABOVE SITE INSPECTIONS, COMPLETE A FULL GROUNDWATER MONITORING WELL INSPECTION AND DOCUMENT RESULTS USING THE QUARTERLY GROUNDWATER WELL INSPECTION REPORT FORM (APPENDIX B) AND ATTACH TO THIS FORM.

John S
Employee

6/12
Date



APPENDIX A - WEEKLY GENERAL LANDFILL AND SITE SECURITY INSPECTION REPORT

Date	Time	Inspector Name
6/19/21	7:00	John Szeyer

FENCE AREA	OK	DAMAGED	REPAIR DATE	REMARKS
A	✓			
B	✓			
C	✓			
D	✓			
E	✓			
F	✓			
G	✓			
H	✓			
I	✓			
J	✓			

GATE	OK	DAMAGED	REPAIR DATE	REMARKS
1	✓			
2	✓			
3	✓			

SECURITY-RELATED ENGINEERED CONTROLS COMMENTS: (Check for condition, damage, signs of security breach)

all good

CAP COMMENTS: (Check for erosion and adequate vegetation)

all good

SURROUNDING AREA COMMENTS: (Check for condition, damage, signs of security breach)

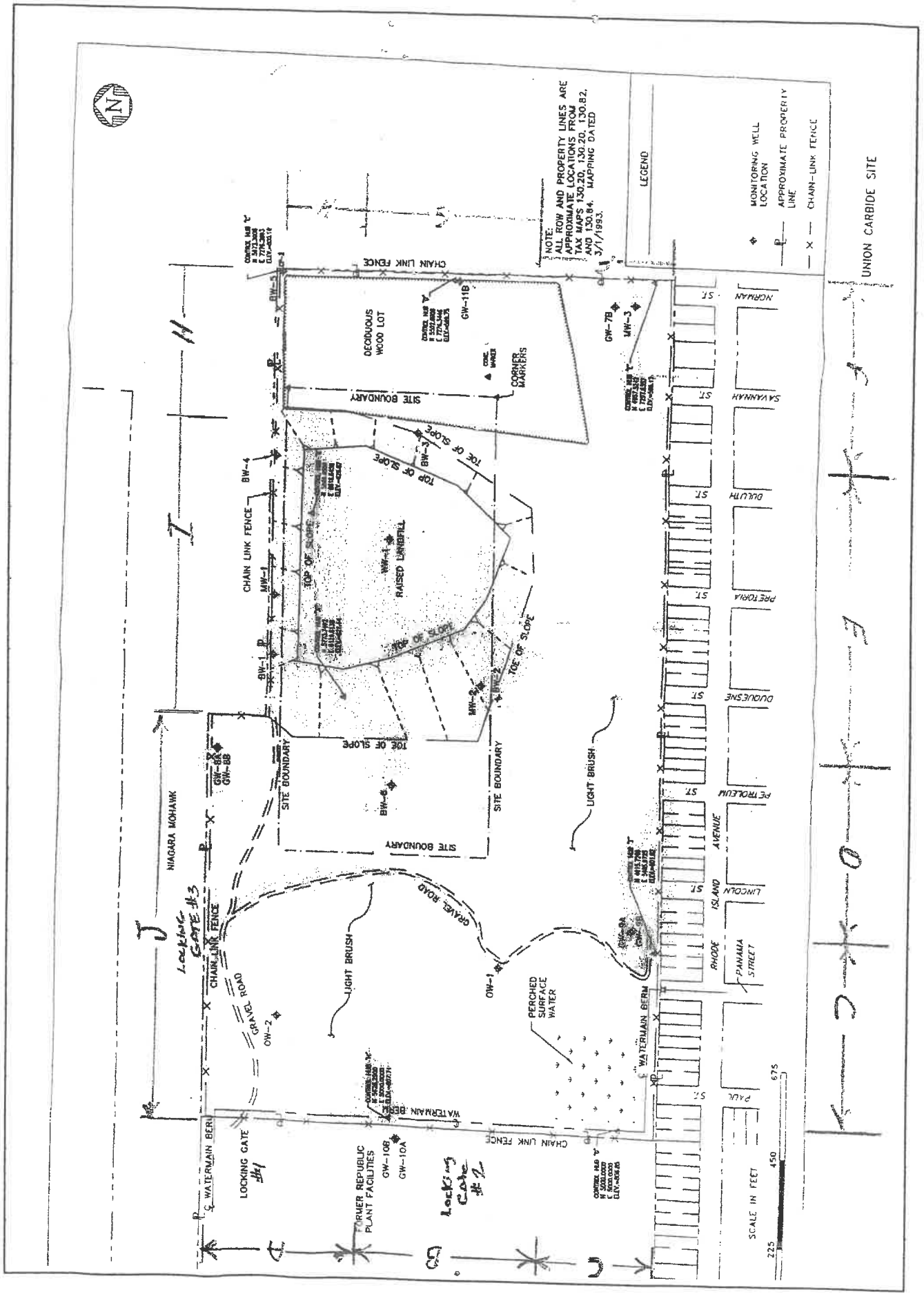
all good

RECORD THE DATE(S) THAT THE ENTIRE CAP WAS MOWED: 6/5

IN THE EVENT THAT ANY SIGN OF A SITE SECURITY BREACH IS IDENTIFIED DURING THE ABOVE SITE INSPECTIONS, COMPLETE A FULL GROUNDWATER MONITORING WELL INSPECTION AND DOCUMENT RESULTS USING THE QUARTERLY GROUNDWATER WELL INSPECTION REPORT FORM (APPENDIX B) AND ATTACH TO THIS FORM.

John
Employee

6/19
Date



APPENDIX A - WEEKLY GENERAL LANDFILL AND SITE SECURITY INSPECTION REPORT

Date	Time	Inspector Name
6/25/21	12:00	John Dwenger

FENCE AREA	OK	DAMAGED	REPAIR DATE	REMARKS
A	✓			
B	✓			
C	✓			
D	✓			
E	✓			
F	✓			
G	✓			
H	✓			
I	✓			
J	✓			

GATE	OK	DAMAGED	REPAIR DATE	REMARKS
1	✓			
2	✓			
3	✓			

SECURITY-RELATED ENGINEERED CONTROLS COMMENTS: (Check for condition, damage, signs of security breach)

all good

CAP COMMENTS: (Check for erosion and adequate vegetation)

all good

SURROUNDING AREA COMMENTS: (Check for condition, damage, signs of security breach)

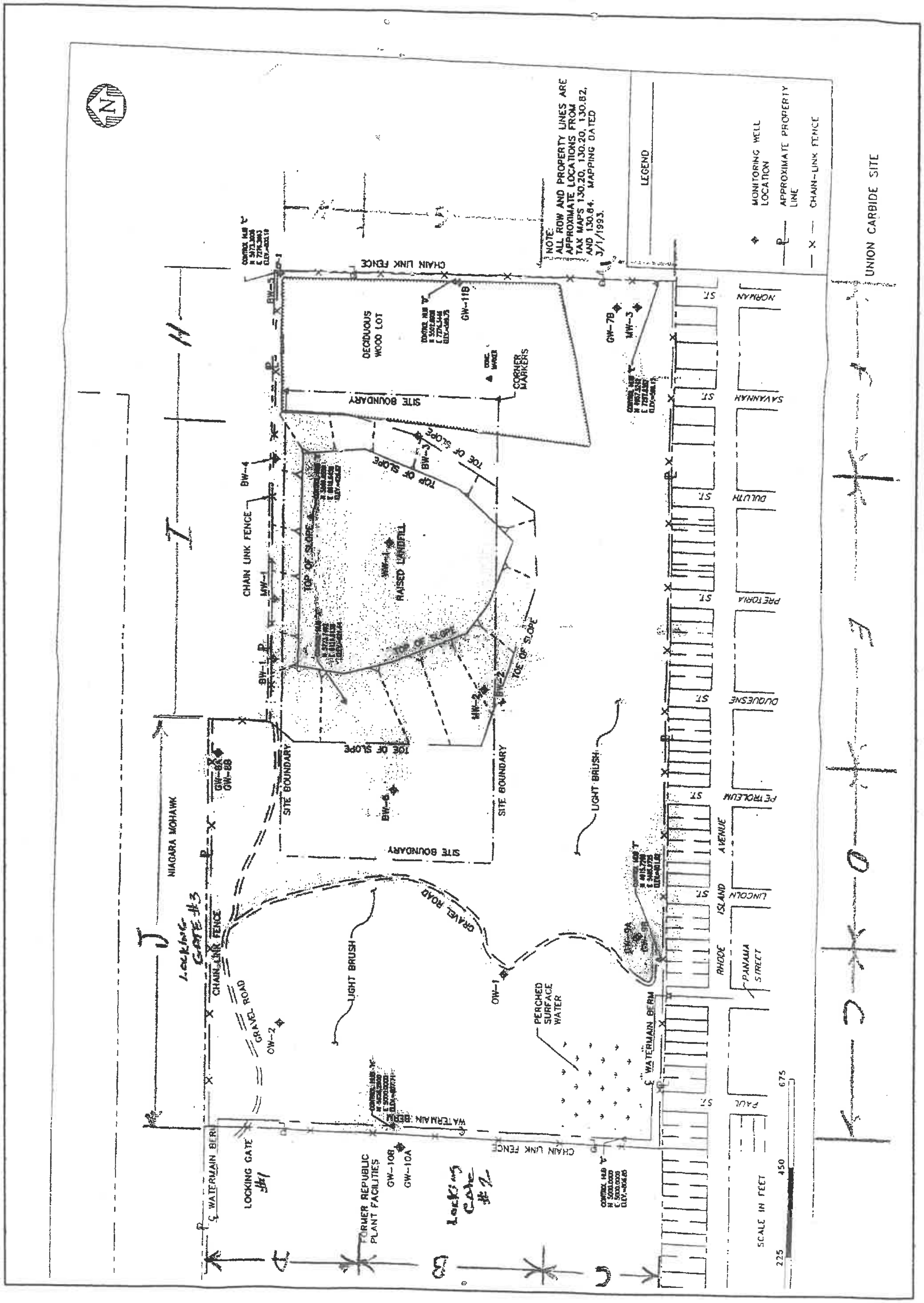
all good

RECORD THE DATE(S) THAT THE ENTIRE CAP WAS MOWED: 6/5

IN THE EVENT THAT ANY SIGN OF A SITE SECURITY BREACH IS IDENTIFIED DURING THE ABOVE SITE INSPECTIONS, COMPLETE A FULL GROUNDWATER MONITORING WELL INSPECTION AND DOCUMENT RESULTS USING THE QUARTERLY GROUNDWATER WELL INSPECTION REPORT FORM (APPENDIX B) AND ATTACH TO THIS FORM.

John
Employee

6/25
Date



APPENDIX A - WEEKLY GENERAL LANDFILL AND SITE SECURITY INSPECTION REPORT

Date	Time	Inspector Name
7/5/21	9:00	John Sawyer

FENCE AREA	OK	DAMAGED	REPAIR DATE	REMARKS
A	✓			
B	✓			
C	✓			
D	✓			
E	✓			
F	✓			
G	✓			
H	✓			
I	✓			
J	✓			

GATE	OK	DAMAGED	REPAIR DATE	REMARKS
1	✓			
2	✓			
3	✓			

SECURITY-RELATED ENGINEERED CONTROLS COMMENTS: (Check for condition, damage, signs of security breach)

all good

CAP COMMENTS: (Check for erosion and adequate vegetation)

all good

SURROUNDING AREA COMMENTS: (Check for condition, damage, signs of security breach)

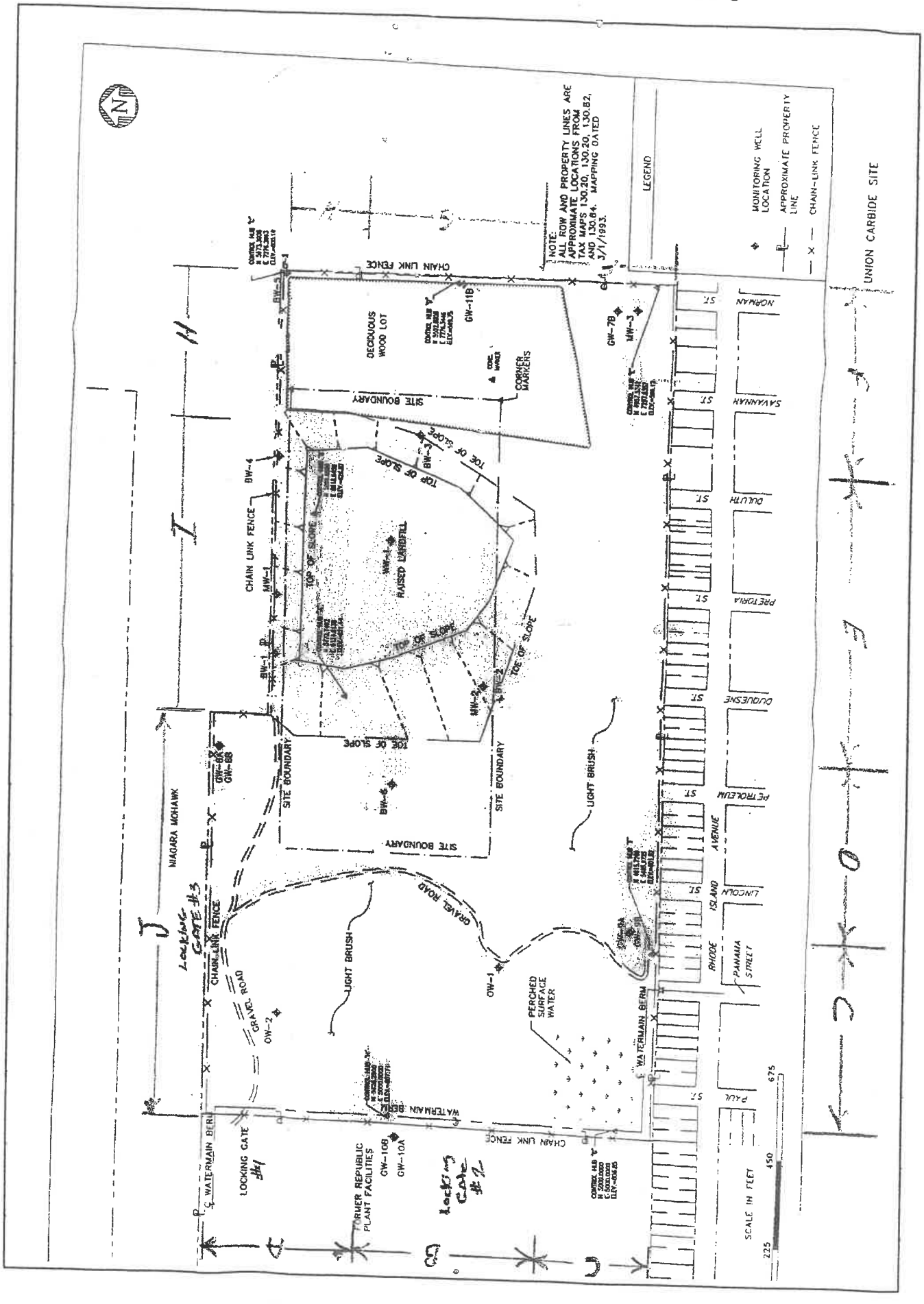
all good

RECORD THE DATE(S) THAT THE ENTIRE CAP WAS MOWED: _____

IN THE EVENT THAT ANY SIGN OF A SITE SECURITY BREACH IS IDENTIFIED DURING THE ABOVE SITE INSPECTIONS, COMPLETE A FULL GROUNDWATER MONITORING WELL INSPECTION AND DOCUMENT RESULTS USING THE QUARTERLY GROUNDWATER WELL INSPECTION REPORT FORM (APPENDIX B) AND ATTACH TO THIS FORM.

John S
Employee

7/5
Date



APPENDIX A - WEEKLY GENERAL LANDFILL AND SITE SECURITY INSPECTION REPORT

Date	Time	Inspector Name
7/17/21	9:00	John Sc[illegible]

FENCE AREA	OK	DAMAGED	REPAIR DATE	REMARKS
A	✓			
B	✓			
C	✓			
D	✓			
E	✓			
F	✓			
G	✓			
H	✓			
I	✓			
J	✓			

GATE	OK	DAMAGED	REPAIR DATE	REMARKS
1	✓			
2	✓			
3	✓			

SECURITY-RELATED ENGINEERED CONTROLS COMMENTS: (Check for condition, damage, signs of security breach)

all good

CAP COMMENTS: (Check for erosion and adequate vegetation)

all good

SURROUNDING AREA COMMENTS: (Check for condition, damage, signs of security breach)

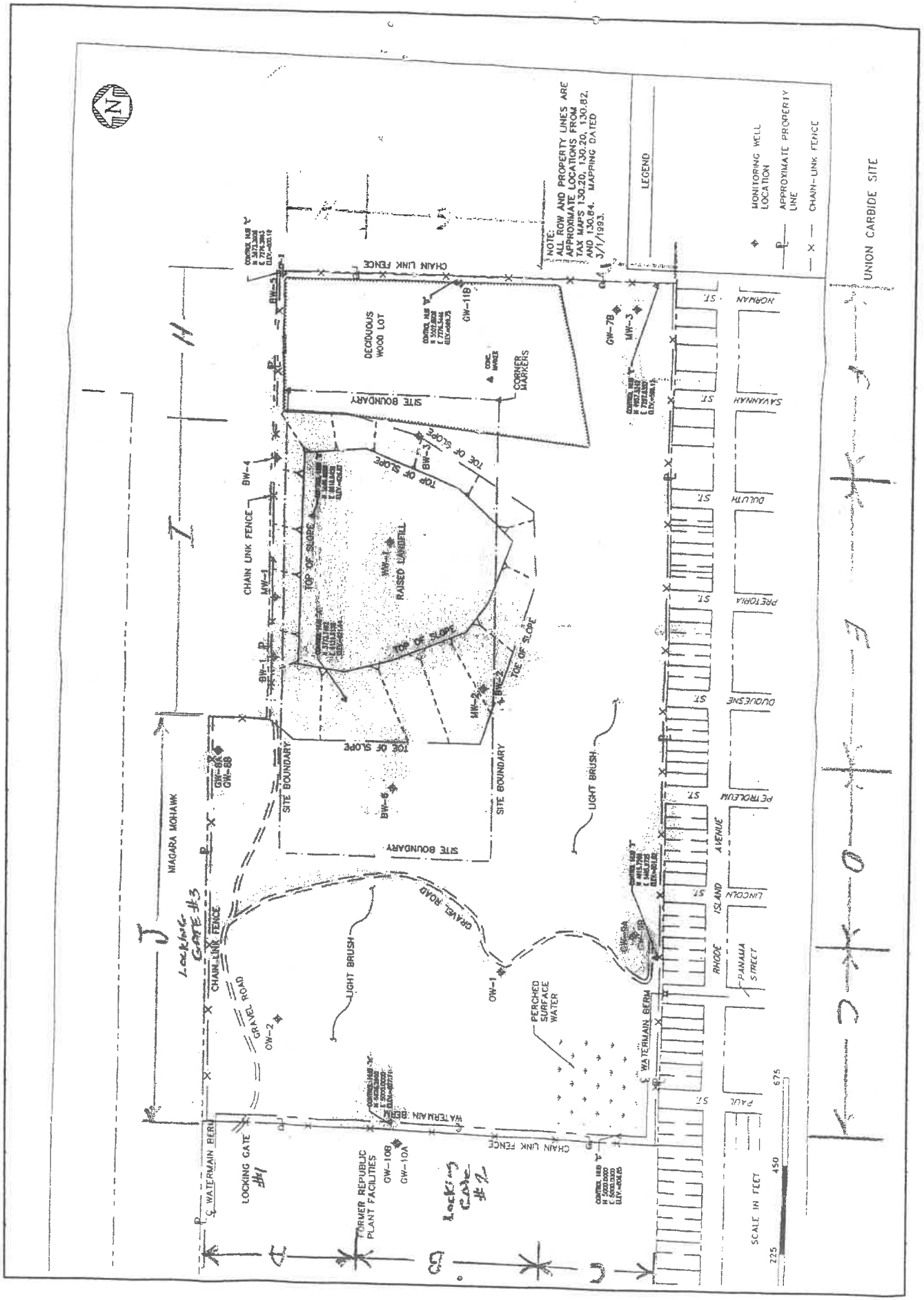
all good

RECORD THE DATE(S) THAT THE ENTIRE CAP WAS MOWED:________________

IN THE EVENT THAT ANY SIGN OF A SITE SECURITY BREACH IS IDENTIFIED DURING THE ABOVE SITE INSPECTIONS, COMPLETE A FULL GROUNDWATER MONITORING WELL INSPECTION AND DOCUMENT RESULTS USING THE QUARTERLY GROUNDWATER WELL INSPECTION REPORT FORM (APPENDIX B) AND ATTACH TO THIS FORM.

John S
Employee

7/17
Date



APPENDIX A - WEEKLY GENERAL LANDFILL AND SITE SECURITY INSPECTION REPORT

Date	Time	Inspector Name
7/23/21	12:30	Ben Sucaya

ENCE ARE	OK	DAMAGED	REPAIR DATE	REMARKS
A	✓			
B	✓			
C	✓			
D	✓			
E	✓			
F	✓			
G	✓			
H	✓			
I	✓			
J	✓			

GATE	OK	DAMAGED	REPAIR DATE	REMARKS
1	✓			
2	✓			
3	✓			

SECURITY-RELATED ENGINEERED CONTROLS COMMENTS: (Check for condition, damage, signs of security breach)

all good

CAP COMMENTS: (Check for erosion and adequate vegetation)

all good

SURROUNDING AREA COMMENTS: (Check for condition, damage, signs of security breach)

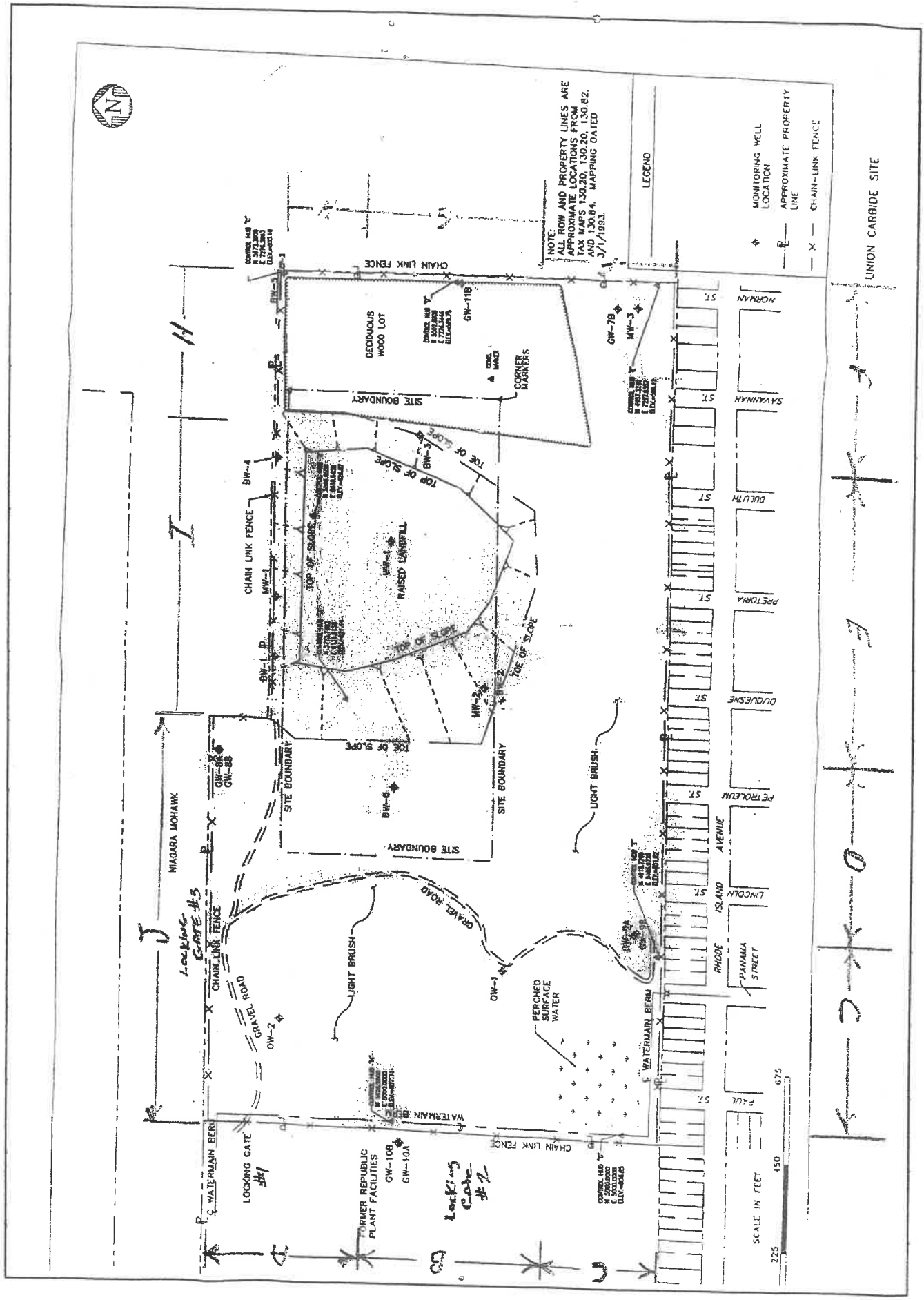
all good

RECORD THE DATE(S) THAT THE ENTIRE CAP WAS MOWED: _____

IN THE EVENT THAT ANY SIGN OF A SITE SECURITY BREACH IS IDENTIFIED DURING THE ABOVE SITE INSPECTIONS, COMPLETE A FULL GROUNDWATER MONITORING WELL INSPECTION AND DOCUMENT RESULTS USING THE QUARTERLY GROUNDWATER WELL INSPECTION REPORT FORM (APPENDIX B) AND ATTACH TO THIS FORM.

John S
Employee

7/23
Date



APPENDIX A - WEEKLY GENERAL LANDFILL AND SITE SECURITY INSPECTION REPORT

Date	Time	Inspector Name
7/31/21	9:30	John Swan

ENCE ARE	OK	DAMAGED	REPAIR DATE	REMARKS
A	✓			
B	✓			
C	✓			
D	✓			
E	✓			
F	✓			
G	✓			
H	✓			
I	✓			
J	✓			

GATE	OK	DAMAGED	REPAIR DATE	REMARKS
1	✓			
2	✓			
3	✓			

SECURITY-RELATED ENGINEERED CONTROLS COMMENTS: (Check for condition, damage, signs of security breach)

all good

CAP COMMENTS: (Check for erosion and adequate vegetation)

all good

SURROUNDING AREA COMMENTS: (Check for condition, damage, signs of security breach)

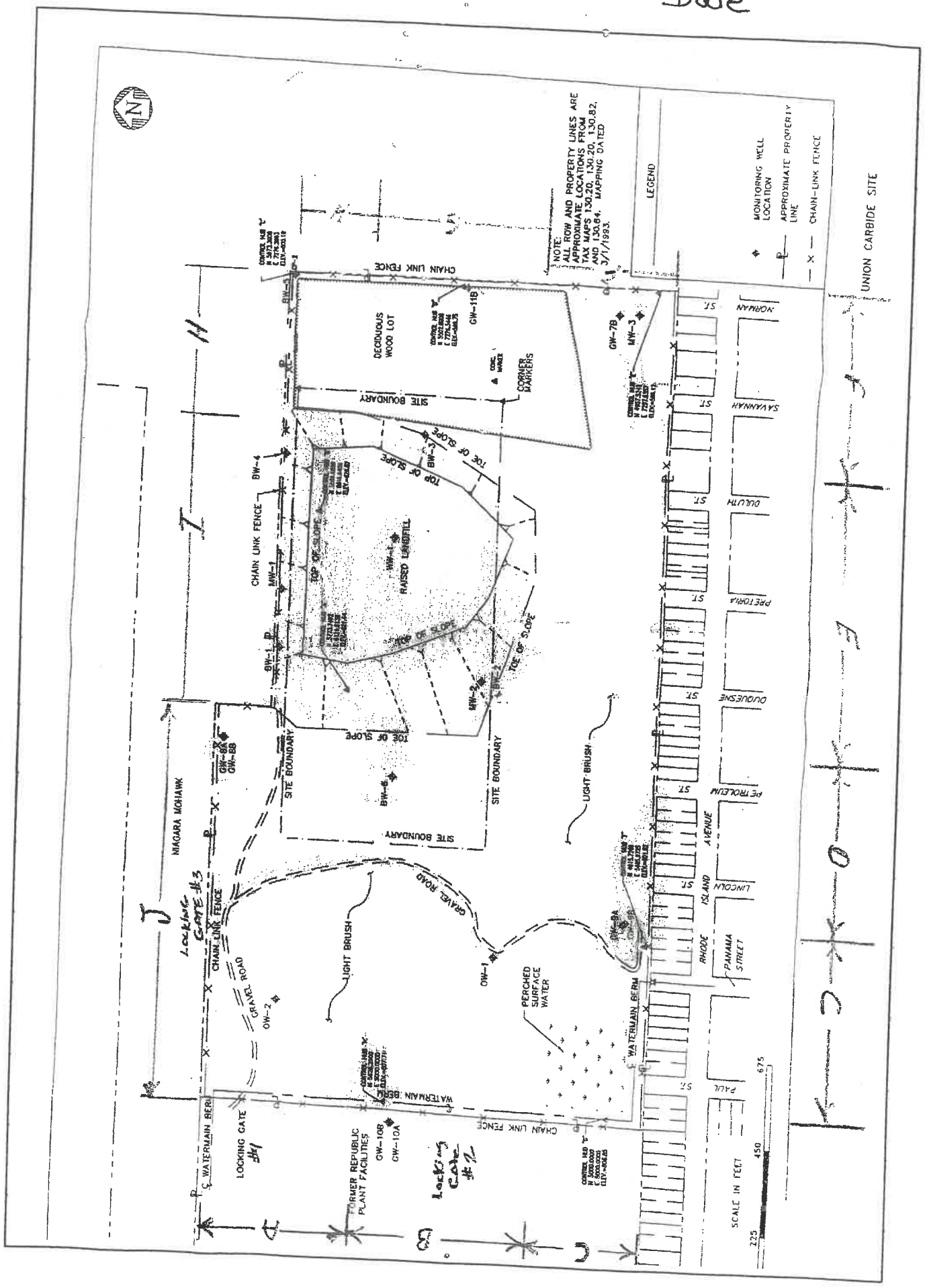
all good

RECORD THE DATE(S) THAT THE ENTIRE CAP WAS MOWED:_____

IN THE EVENT THAT ANY SIGN OF A SITE SECURITY BREACH IS IDENTIFIED DURING THE ABOVE SITE INSPECTIONS, COMPLETE A FULL GROUNDWATER MONITORING WELL INSPECTION AND DOCUMENT RESULTS USING THE QUARTERLY GROUNDWATER WELL INSPECTION REPORT FORM (APPENDIX B) AND ATTACH TO THIS FORM.

John S
Employee

7/31
Date



APPENDIX A - WEEKLY GENERAL LANDFILL AND SITE SECURITY INSPECTION REPORT

Date	Time	Inspector Name
8/7/21	7:00	John Savoy

FENCE AREA	OK	DAMAGED	REPAIR DATE	REMARKS
A	✓			
B	✓			
C	✓			
D	✓			
E	✓			
F	✓			
G	✓			
H	✓			
I	✓			
J	✓			

GATE	OK	DAMAGED	REPAIR DATE	REMARKS
1	✓			
2	✓			
3	✓			

SECURITY-RELATED ENGINEERED CONTROLS COMMENTS: (Check for condition, damage, signs of security breach)

all good

CAP COMMENTS: (Check for erosion and adequate vegetation)

all good

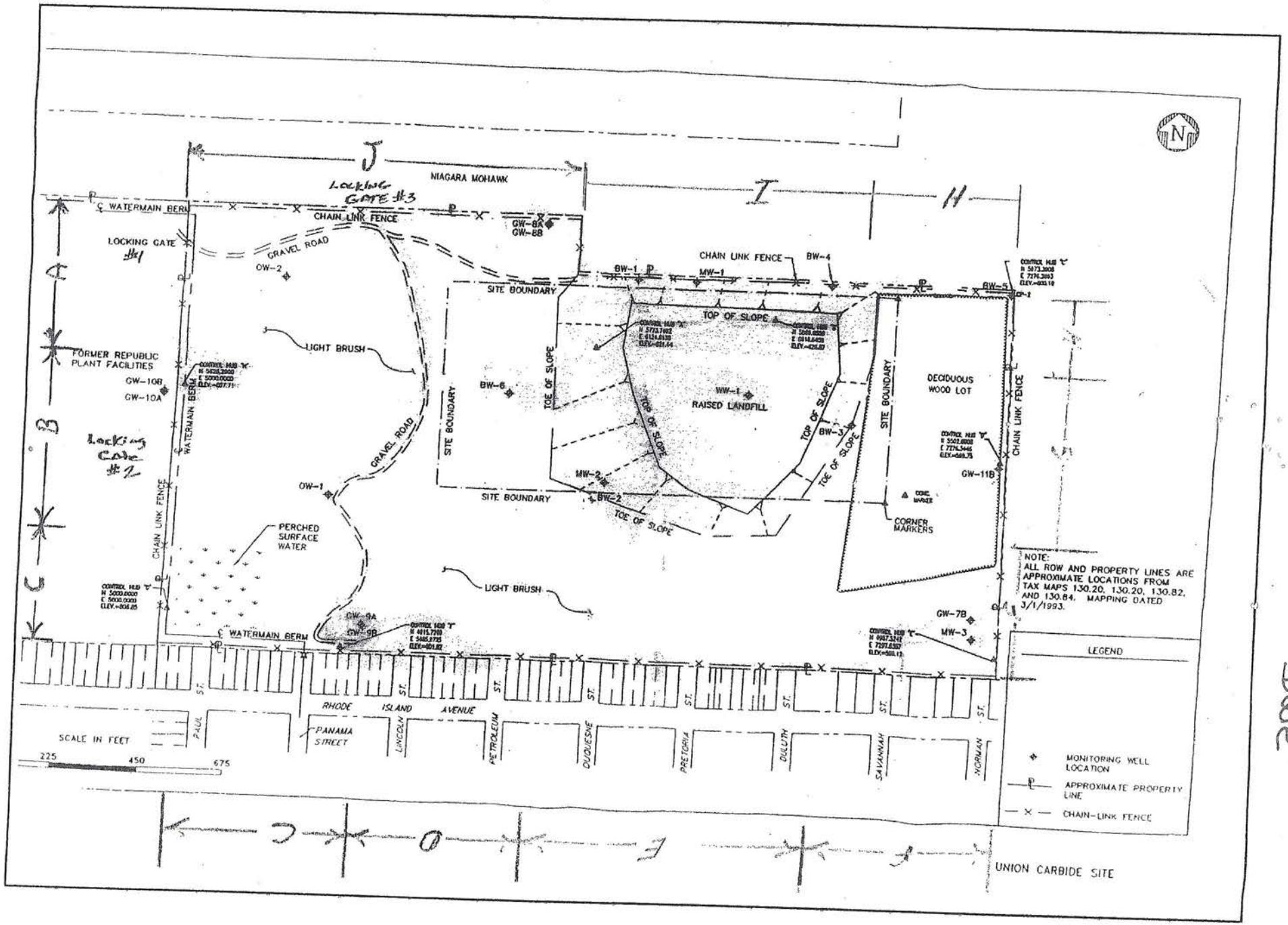
SURROUNDING AREA COMMENTS: (Check for condition, damage, signs of security breach)

all good

RECORD THE DATE(S) THAT THE ENTIRE CAP WAS MOWED:_____

IN THE EVENT THAT ANY SIGN OF A SITE SECURITY BREACH IS IDENTIFIED DURING THE ABOVE SITE INSPECTIONS, COMPLETE A FULL GROUNDWATER MONITORING WELL INSPECTION AND DOCUMENT RESULTS USING THE QUARTERLY GROUNDWATER WELL INSPECTION REPORT FORM (APPENDIX B) AND ATTACH TO THIS FORM.

John S
Employee



8/7
Date

APPENDIX A - WEEKLY GENERAL LANDFILL AND SITE SECURITY INSPECTION REPORT

Date	Time	Inspector Name
8/10/21	7:00	John Sweeney

ENCE ARE	OK	DAMAGED	REPAIR DATE	REMARKS
A	✓			
B	✓			
C	✓			
D	✓			
E	✓			
F	✓			
G	✓			
H	✓			
I	✓			
J	✓			

GATE	OK	DAMAGED	REPAIR DATE	REMARKS
1	✓			
2	✓			
3	✓			

SECURITY-RELATED ENGINEERED CONTROLS COMMENTS: (Check for condition, damage, signs of security breach)

all good

CAP COMMENTS: (Check for erosion and adequate vegetation)

all good

SURROUNDING AREA COMMENTS: (Check for condition, damage, signs of security breach)

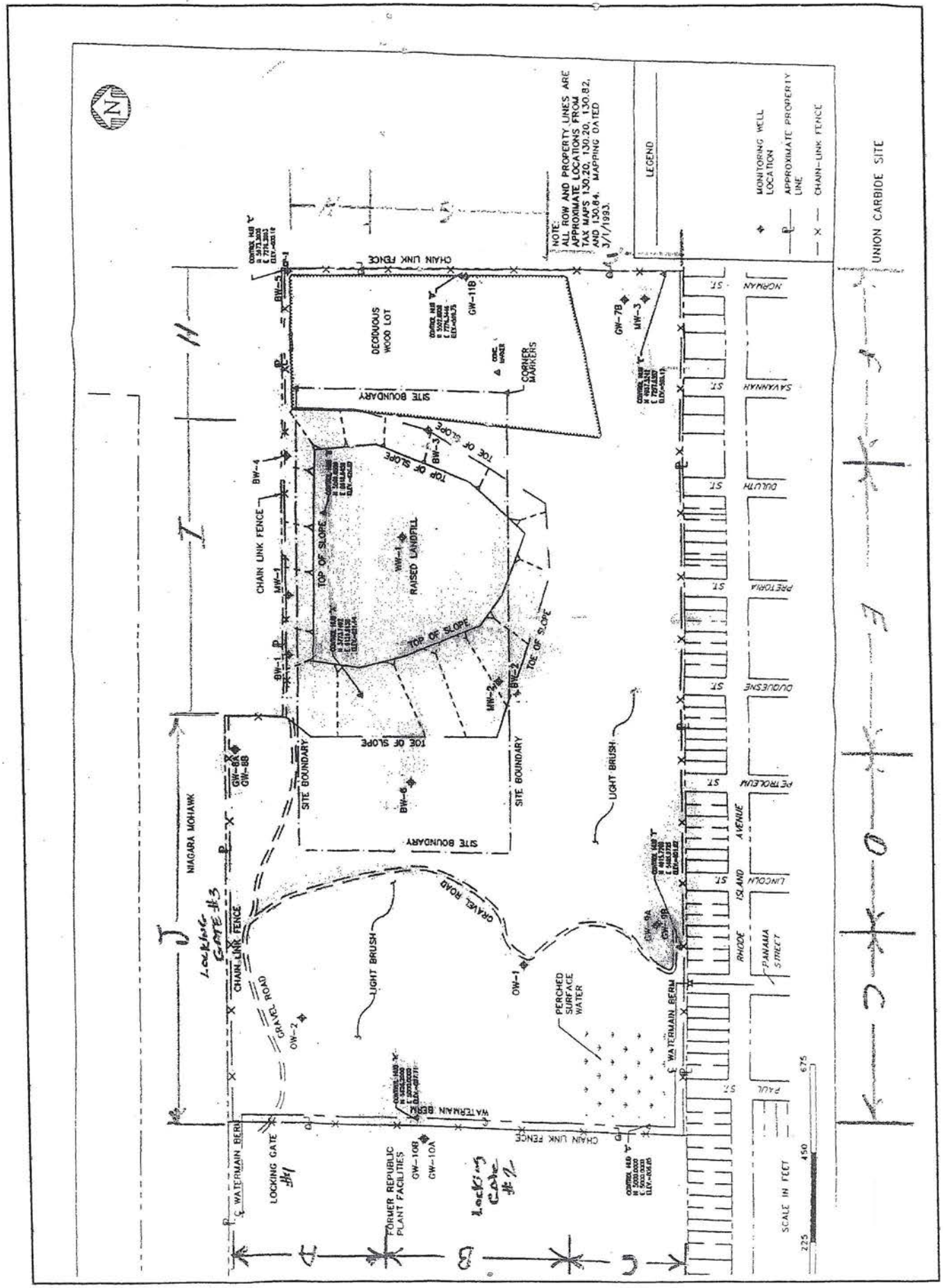
all good

RECORD THE DATE(S) THAT THE ENTIRE CAP WAS MOWED:_____

IN THE EVENT THAT ANY SIGN OF A SITE SECURITY BREACH IS IDENTIFIED DURING THE ABOVE SITE INSPECTIONS, COMPLETE A FULL GROUNDWATER MONITORING WELL INSPECTION AND DOCUMENT RESULTS USING THE QUARTERLY GROUNDWATER WELL INSPECTION REPORT FORM (APPENDIX B) AND ATTACH TO THIS FORM.

John
Employee

8/14
Date



APPENDIX A - WEEKLY GENERAL LANDFILL AND SITE SECURITY INSPECTION REPORT

Date	Time	Inspector Name
8/23/21	8:00	John Sweeney

ENCE ARE	OK	DAMAGED	REPAIR DATE	REMARKS
A	✓			
B	✓			
C	✓			
D	✓			
E	✓			
F	✓			
G	✓			
H	✓			
I	✓			
J	✓			

GATE	OK	DAMAGED	REPAIR DATE	REMARKS
1	✓			
2	✓			
3	✓			

SECURITY-RELATED ENGINEERED CONTROLS COMMENTS: (Check for condition, damage, signs of security breach)

all good

CAP COMMENTS: (Check for erosion and adequate vegetation)

all good

SURROUNDING AREA COMMENTS: (Check for condition, damage, signs of security breach)

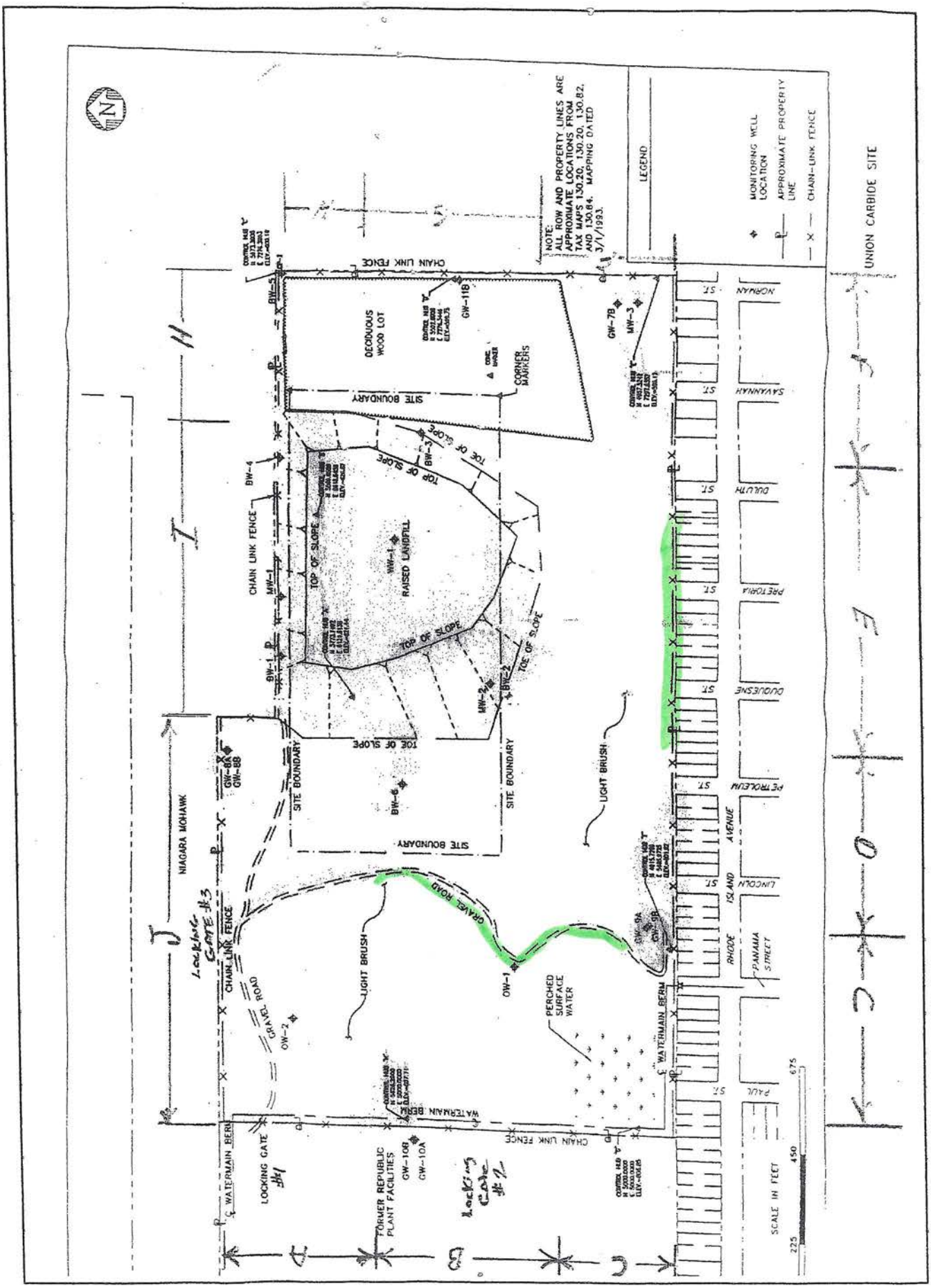
all good

RECORD THE DATE(S) THAT THE ENTIRE CAP WAS MOWED:_____

IN THE EVENT THAT ANY SIGN OF A SITE SECURITY BREACH IS IDENTIFIED DURING THE ABOVE SITE INSPECTIONS, COMPLETE A FULL GROUNDWATER MONITORING WELL INSPECTION AND DOCUMENT RESULTS USING THE QUARTERLY GROUNDWATER WELL INSPECTION REPORT FORM (APPENDIX B) AND ATTACH TO THIS FORM.

John
Employee

8/93
Date



APPENDIX A - WEEKLY GENERAL LANDFILL AND SITE SECURITY INSPECTION REPORT

Date	Time	Inspector Name
8/28/21	7:00	John Serang

FENCE AREA	OK	DAMAGED	REPAIR DATE	REMARKS
A	✓			
B	✓			
C	✓			
D	✓			
E	✓			
F	✓			
G	✓			
H	✓			
I	✓			
J	✓			

GATE	OK	DAMAGED	REPAIR DATE	REMARKS
1	✓			
2	✓			
3	✓			

SECURITY-RELATED ENGINEERED CONTROLS COMMENTS: (Check for condition, damage, signs of security breach)

all good

CAP COMMENTS: (Check for erosion and adequate vegetation)

all good

SURROUNDING AREA COMMENTS: (Check for condition, damage, signs of security breach)

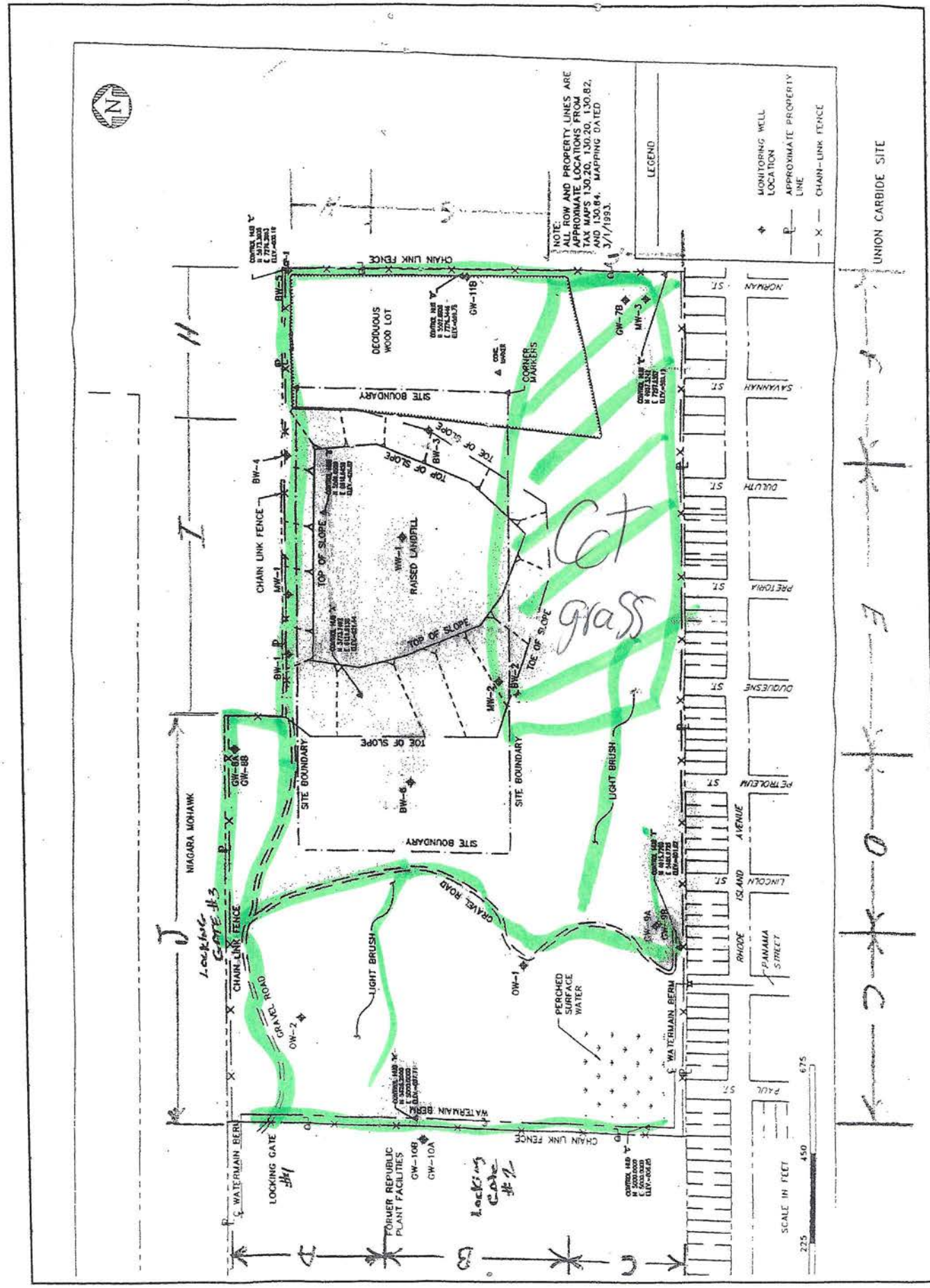
all good

RECORD THE DATE(S) THAT THE ENTIRE CAP WAS MOWED:_____

IN THE EVENT THAT ANY SIGN OF A SITE SECURITY BREACH IS IDENTIFIED DURING THE ABOVE SITE INSPECTIONS, COMPLETE A FULL GROUNDWATER MONITORING WELL INSPECTION AND DOCUMENT RESULTS USING THE QUARTERLY GROUNDWATER WELL INSPECTION REPORT FORM (APPENDIX B) AND ATTACH TO THIS FORM.

John Smith
Employee

8/28/21
Date



APPENDIX A - WEEKLY GENERAL LANDFILL AND SITE SECURITY INSPECTION REPORT

Date	Time	Inspector Name
9/5/21	7:00	John Swoag

ENCE ARE	OK	DAMAGED	REPAIR DATE	REMARKS
A	✓			
B	✓			
C	✓			
D	✓			
E	✓			
F	✓			
G	✓			
H	✓			
I	✓			
J	✓			

GATE	OK	DAMAGED	REPAIR DATE	REMARKS
1	✓			
2	✓			
3	✓			

SECURITY-RELATED ENGINEERED CONTROLS COMMENTS: (Check for condition, damage, signs of security breach)

all good

CAP COMMENTS: (Check for erosion and adequate vegetation)

all good

SURROUNDING AREA COMMENTS: (Check for condition, damage, signs of security breach)

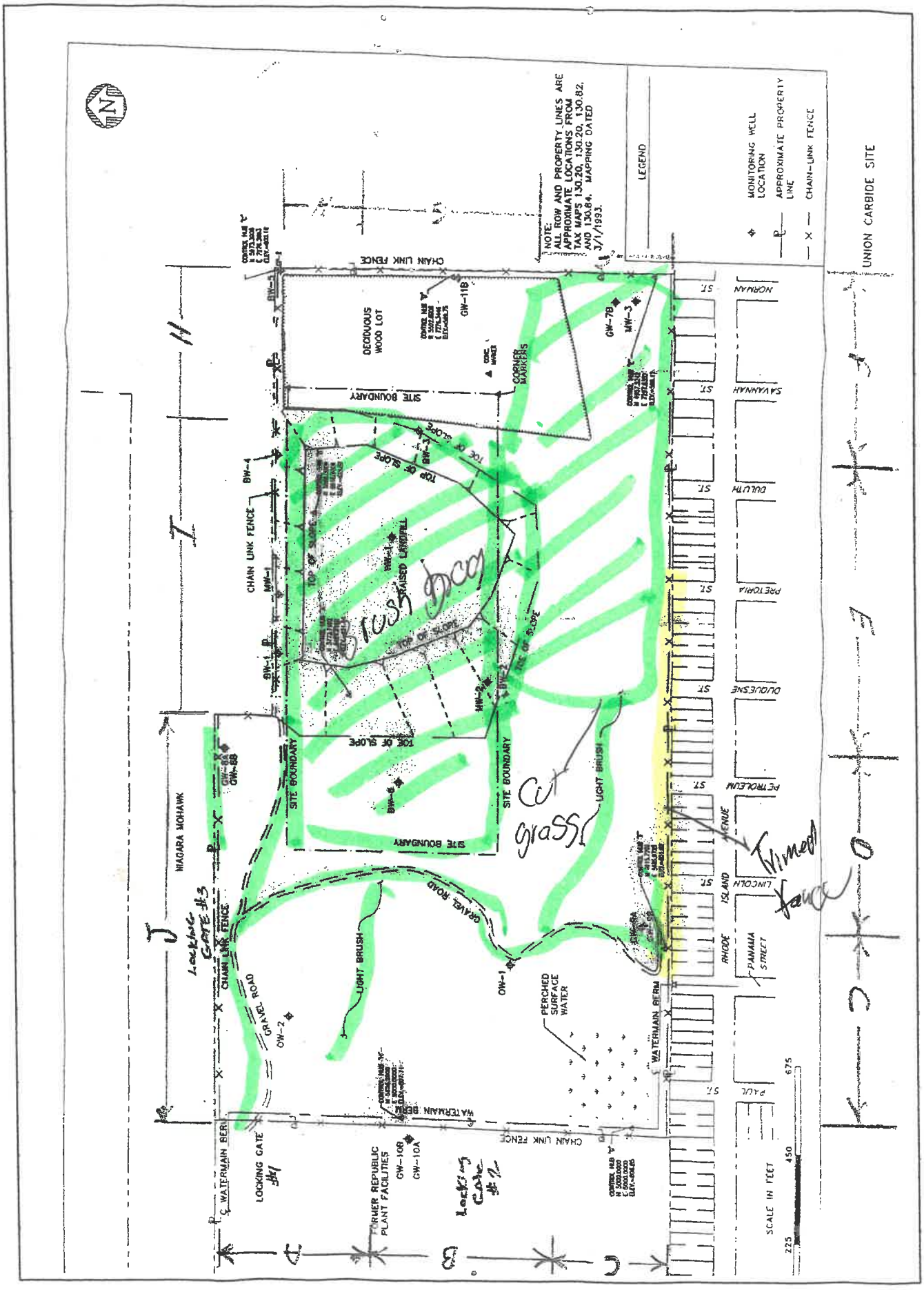
all good

RECORD THE DATE(S) THAT THE ENTIRE CAP WAS MOWED: 9/5/21

IN THE EVENT THAT ANY SIGN OF A SITE SECURITY BREACH IS IDENTIFIED DURING THE ABOVE SITE INSPECTIONS, COMPLETE A FULL GROUNDWATER MONITORING WELL INSPECTION AND DOCUMENT RESULTS USING THE QUARTERLY GROUNDWATER WELL INSPECTION REPORT FORM (APPENDIX B) AND ATTACH TO THIS FORM.

John Sweeny
Employee

9/4/21
Date



APPENDIX A - WEEKLY GENERAL LANDFILL AND SITE SECURITY INSPECTION REPORT

Date	Time	Inspector Name
9/13/21	4:00	Dan Sweeney

ENCE ARE	OK	DAMAGED	REPAIR DATE	REMARKS
A	✓			
B	✓			
C	✓			
D	✓			
E	✓			
F	✓			
G	✓			
H	✓			
I	✓			
J	✓			

GATE	OK	DAMAGED	REPAIR DATE	REMARKS
1	✓			
2	✓			
3	✓			

SECURITY-RELATED ENGINEERED CONTROLS COMMENTS: (Check for condition, damage, signs of security breach)

all good

CAP COMMENTS: (Check for erosion and adequate vegetation)

all good

SURROUNDING AREA COMMENTS: (Check for condition, damage, signs of security breach)

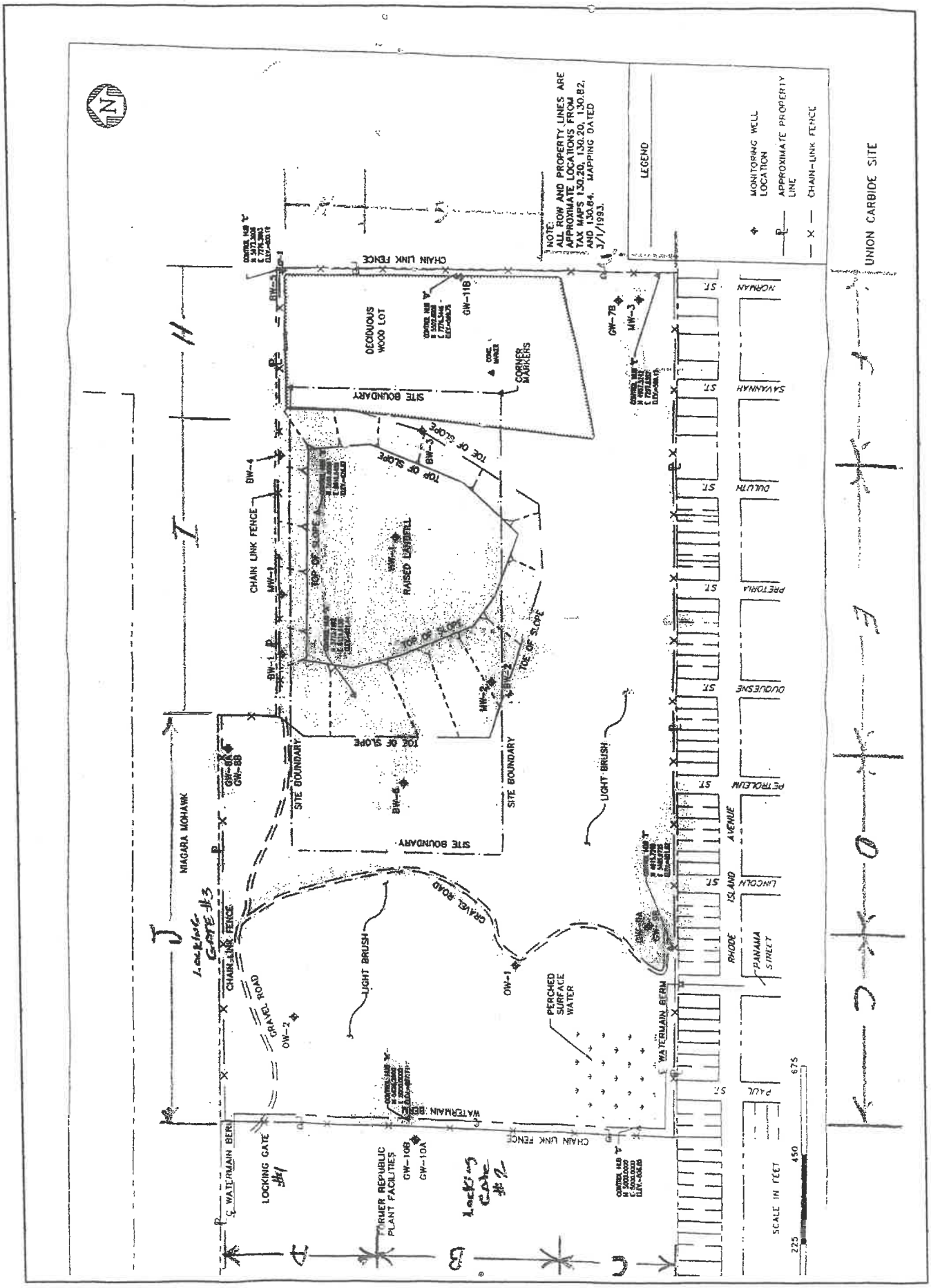
all good

RECORD THE DATE(S) THAT THE ENTIRE CAP WAS MOWED: 9/3/21

IN THE EVENT THAT ANY SIGN OF A SITE SECURITY BREACH IS IDENTIFIED DURING THE ABOVE SITE INSPECTIONS, COMPLETE A FULL GROUNDWATER MONITORING WELL INSPECTION AND DOCUMENT RESULTS USING THE QUARTERLY GROUNDWATER WELL INSPECTION REPORT FORM (APPENDIX B) AND ATTACH TO THIS FORM.

John
Employee

9/13
Date



APPENDIX A - WEEKLY GENERAL LANDFILL AND SITE SECURITY INSPECTION REPORT

Date	Time	Inspector Name
9/18	1200	Eric

ENCE ARE	OK	DAMAGED	REPAIR DATE	REMARKS
A	✓			
B	✓			
C	✓			
D	✓			
E	✓			
F	✓			
G	✓			
H	✓			
I	✓			
J	✓			

GATE	OK	DAMAGED	REPAIR DATE	REMARKS
1	✓			
2	✓			
3	✓			

SECURITY-RELATED ENGINEERED CONTROLS COMMENTS: (Check for condition, damage, signs of security breach)

OK

CAP COMMENTS: (Check for erosion and adequate vegetation)

OK

SURROUNDING AREA COMMENTS: (Check for condition, damage, signs of security breach)

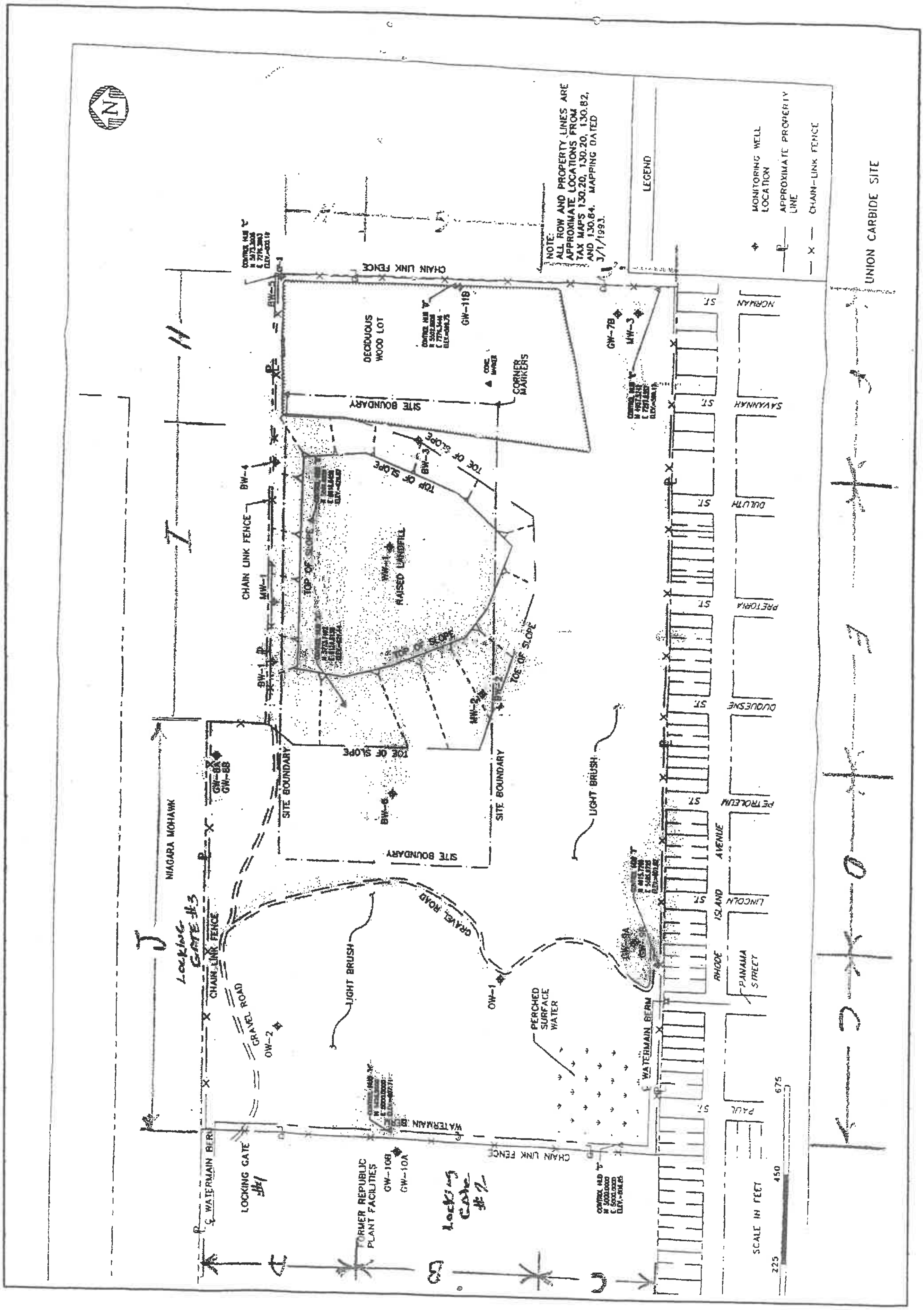
OK

RECORD THE DATE(S) THAT THE ENTIRE CAP WAS MOWED:_____

IN THE EVENT THAT ANY SIGN OF A SITE SECURITY BREACH IS IDENTIFIED DURING THE ABOVE SITE INSPECTIONS, COMPLETE A FULL GROUNDWATER MONITORING WELL INSPECTION AND DOCUMENT RESULTS USING THE QUARTERLY GROUNDWATER WELL INSPECTION REPORT FORM (APPENDIX B) AND ATTACH TO THIS FORM.

Eric
Employee

9/18
Date



APPENDIX A - WEEKLY GENERAL LANDFILL AND SITE SECURITY INSPECTION REPORT

Date	Time	Inspector Name
9/26	1000	Eric

ENCE ARE.	OK	DAMAGED	REPAIR DATE	REMARKS
A	✓			
B	✓			
C	✓			
D	✓			
E	✓			
F	✓			
G	✓			
H	✓			
I	✓			
J	✓			

GATE	OK	DAMAGED	REPAIR DATE	REMARKS
1	✓			
2	✓			
3	✓			

SECURITY-RELATED ENGINEERED CONTROLS COMMENTS: (Check for condition, damage, signs of security breach)

ok

CAP COMMENTS: (Check for erosion and adequate vegetation)

ok

SURROUNDING AREA COMMENTS: (Check for condition, damage, signs of security breach)

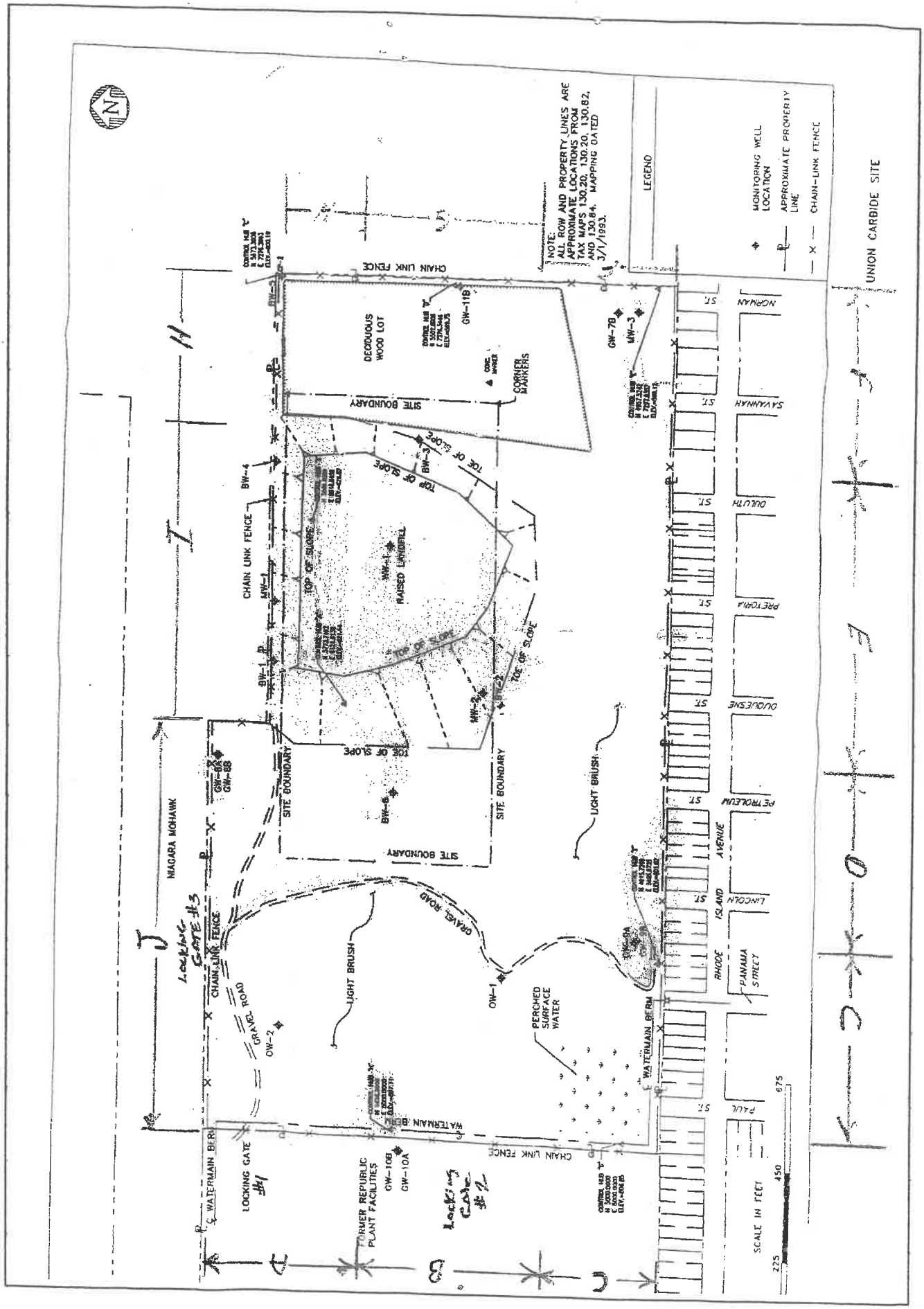
ok

RECORD THE DATE(S) THAT THE ENTIRE CAP WAS MOWED:_____

IN THE EVENT THAT ANY SIGN OF A SITE SECURITY BREACH IS IDENTIFIED DURING THE ABOVE SITE INSPECTIONS, COMPLETE A FULL GROUNDWATER MONITORING WELL INSPECTION AND DOCUMENT RESULTS USING THE QUARTERLY GROUNDWATER WELL INSPECTION REPORT FORM (APPENDIX B) AND ATTACH TO THIS FORM.

Erig
Employee

9/26
Date



APPENDIX A - WEEKLY GENERAL LANDFILL AND SITE SECURITY INSPECTION REPORT

Date	Time	Inspector Name
10/2	1800	ERIC

ENCE ARE	OK	DAMAGED	REPAIR DATE	REMARKS
A	✓			
B	✓			
C	✓			
D	✓			
E	✓			
F	✓			
G	✓			
H	✓			
I	✓			
J	✓			

GATE	OK	DAMAGED	REPAIR DATE	REMARKS
1	✓			
2	✓			
3	✓			

SECURITY-RELATED ENGINEERED CONTROLS COMMENTS: (Check for condition, damage, signs of security breach)

OK

CAP COMMENTS: (Check for erosion and adequate vegetation)

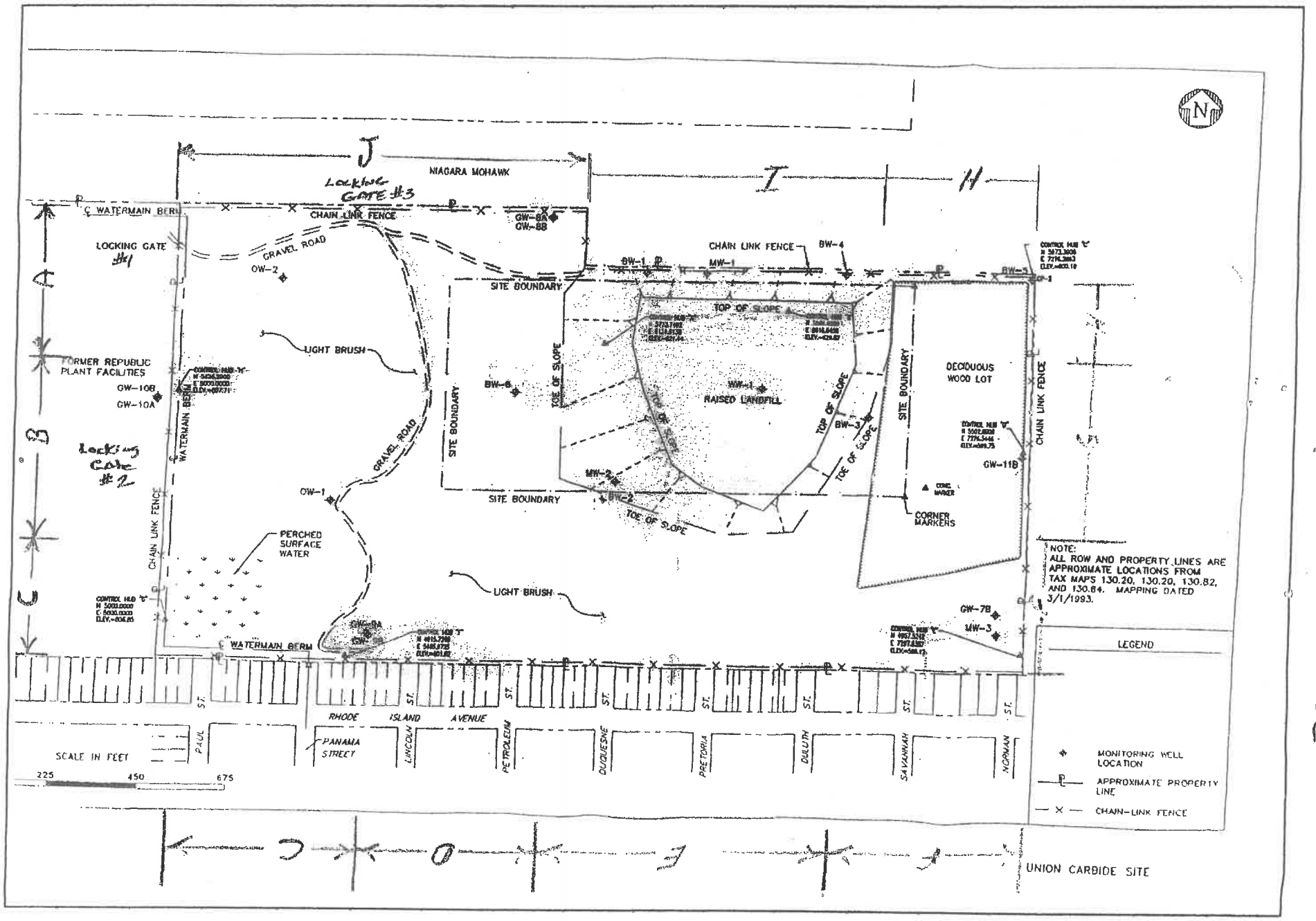
OK

SURROUNDING AREA COMMENTS: (Check for condition, damage, signs of security breach)

OK

RECORD THE DATE(S) THAT THE ENTIRE CAP WAS MOWED: 9/3

IN THE EVENT THAT ANY SIGN OF A SITE SECURITY BREACH IS IDENTIFIED DURING THE ABOVE SITE INSPECTIONS, COMPLETE A FULL GROUNDWATER MONITORING WELL INSPECTION AND DOCUMENT RESULTS USING THE QUARTERLY GROUNDWATER WELL INSPECTION REPORT FORM (APPENDIX B) AND ATTACH TO THIS FORM.



Employee

Date

APPENDIX A - WEEKLY GENERAL LANDFILL AND SITE SECURITY INSPECTION REPORT

Date	Time	Inspector Name
10/10/21	7:00	John Savage

FENCE AREA	OK	DAMAGED	REPAIR DATE	REMARKS
A	✓			
B	✓			
C	✓			
D	✓			
E	✓			
F	✓			
G	✓			
H	✓			
I	✓			
J	✓			

GATE	OK	DAMAGED	REPAIR DATE	REMARKS
1	✓			
2	✓			
3	✓			

SECURITY-RELATED ENGINEERED CONTROLS COMMENTS: (Check for condition, damage, signs of security breach)

all good

CAP COMMENTS: (Check for erosion and adequate vegetation)

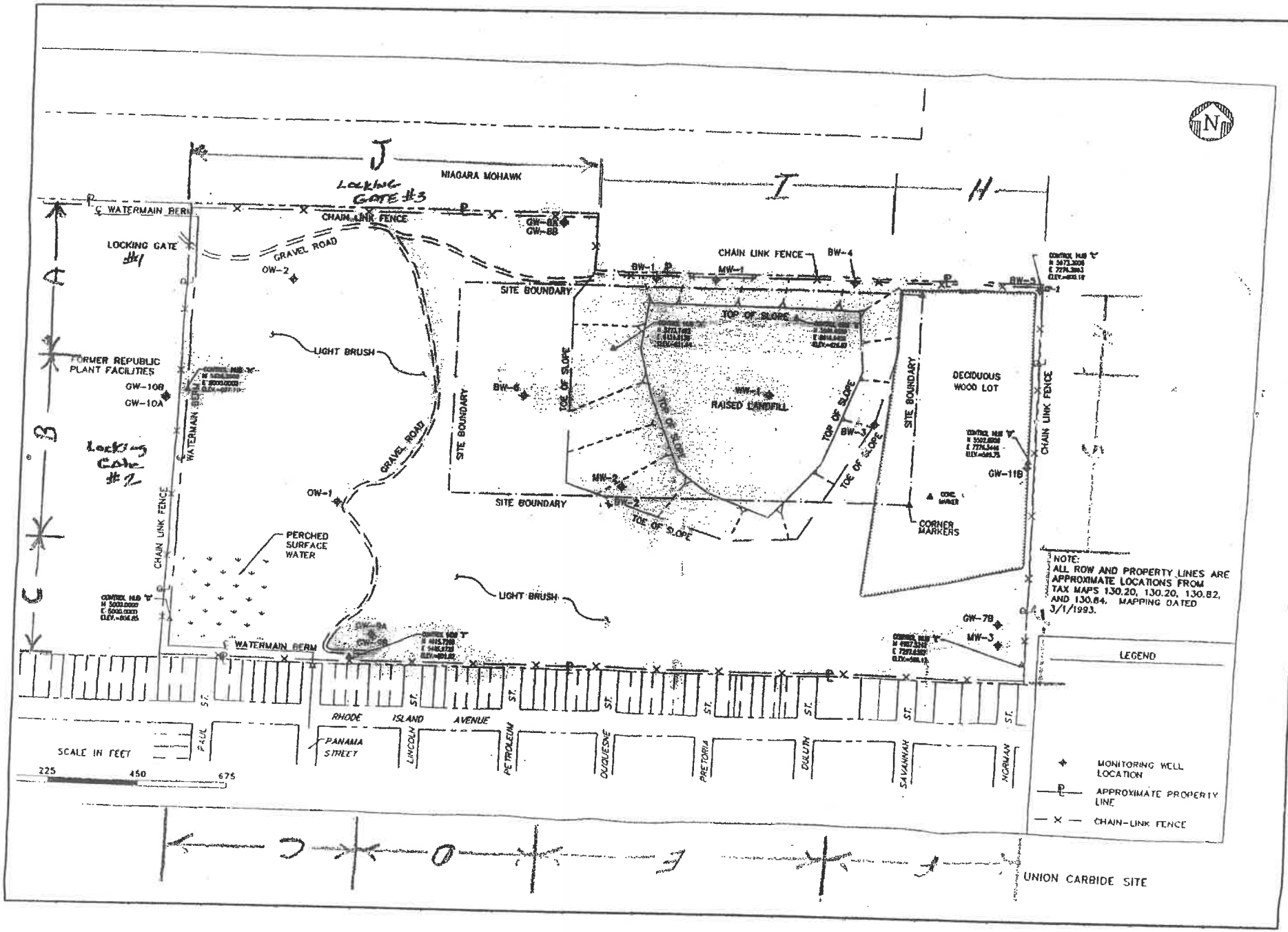
all good

SURROUNDING AREA COMMENTS: (Check for condition, damage, signs of security breach)

all good

RECORD THE DATE(S) THAT THE ENTIRE CAP WAS MOWED:________________

IN THE EVENT THAT ANY SIGN OF A SITE SECURITY BREACH IS IDENTIFIED DURING THE ABOVE SITE INSPECTIONS, COMPLETE A FULL GROUNDWATER MONITORING WELL INSPECTION AND DOCUMENT RESULTS USING THE QUARTERLY GROUNDWATER WELL INSPECTION REPORT FORM (APPENDIX B) AND ATTACH TO THIS FORM.



Employee

Date

APPENDIX A - WEEKLY GENERAL LANDFILL AND SITE SECURITY INSPECTION REPORT

Date	Time	Inspector Name
10/16	12pm	ERA

ENCE ARE	OK	DAMAGED	REPAIR DATE	REMARKS
A	✓			
B	✓			
C	✓			
D	✓			
E	✓			
F	✓			
G	✓			
H	✓			
I	✓			
J	✓			

GATE	OK	DAMAGED	REPAIR DATE	REMARKS
1	✓			
2	✓			
3	✓			

SECURITY-RELATED ENGINEERED CONTROLS COMMENTS: (Check for condition, damage, signs of security breach)

ok

CAP COMMENTS: (Check for erosion and adequate vegetation)

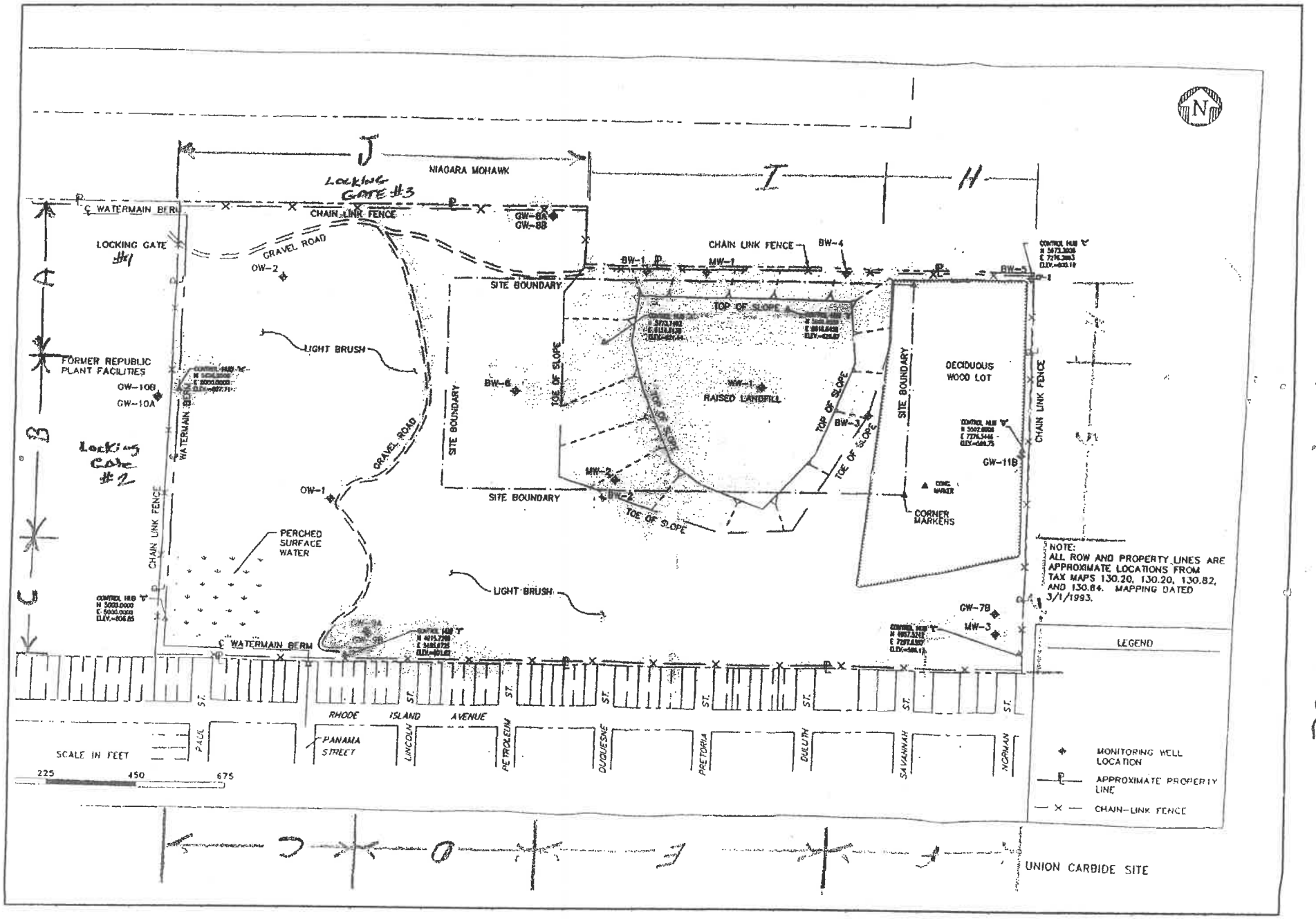
ok

SURROUNDING AREA COMMENTS: (Check for condition, damage, signs of security breach)

ok

RECORD THE DATE(S) THAT THE ENTIRE CAP WAS MOWED:_____

IN THE EVENT THAT ANY SIGN OF A SITE SECURITY BREACH IS IDENTIFIED DURING THE ABOVE SITE INSPECTIONS, COMPLETE A FULL GROUNDWATER MONITORING WELL INSPECTION AND DOCUMENT RESULTS USING THE QUARTERLY GROUNDWATER WELL INSPECTION REPORT FORM (APPENDIX B) AND ATTACH TO THIS FORM.



Employee

Date

APPENDIX A - WEEKLY GENERAL LANDFILL AND SITE SECURITY INSPECTION REPORT

Date	Time	Inspector Name
10/24	900	EMS

ENCE ARE.	OK	DAMAGED	REPAIR DATE	REMARKS
A	✓			
B	✓			
C	✓			
D	✓			
E	✓			
F	✓			
G	✓			
H	✓			
I	✓			
J	✓			

GATE	OK	DAMAGED	REPAIR DATE	REMARKS
1	✓			
2	✓			
3	✓			

SECURITY-RELATED ENGINEERED CONTROLS COMMENTS: (Check for condition, damage, signs of security breach)

OK

CAP COMMENTS: (Check for erosion and adequate vegetation)

OK

SURROUNDING AREA COMMENTS: (Check for condition, damage, signs of security breach)

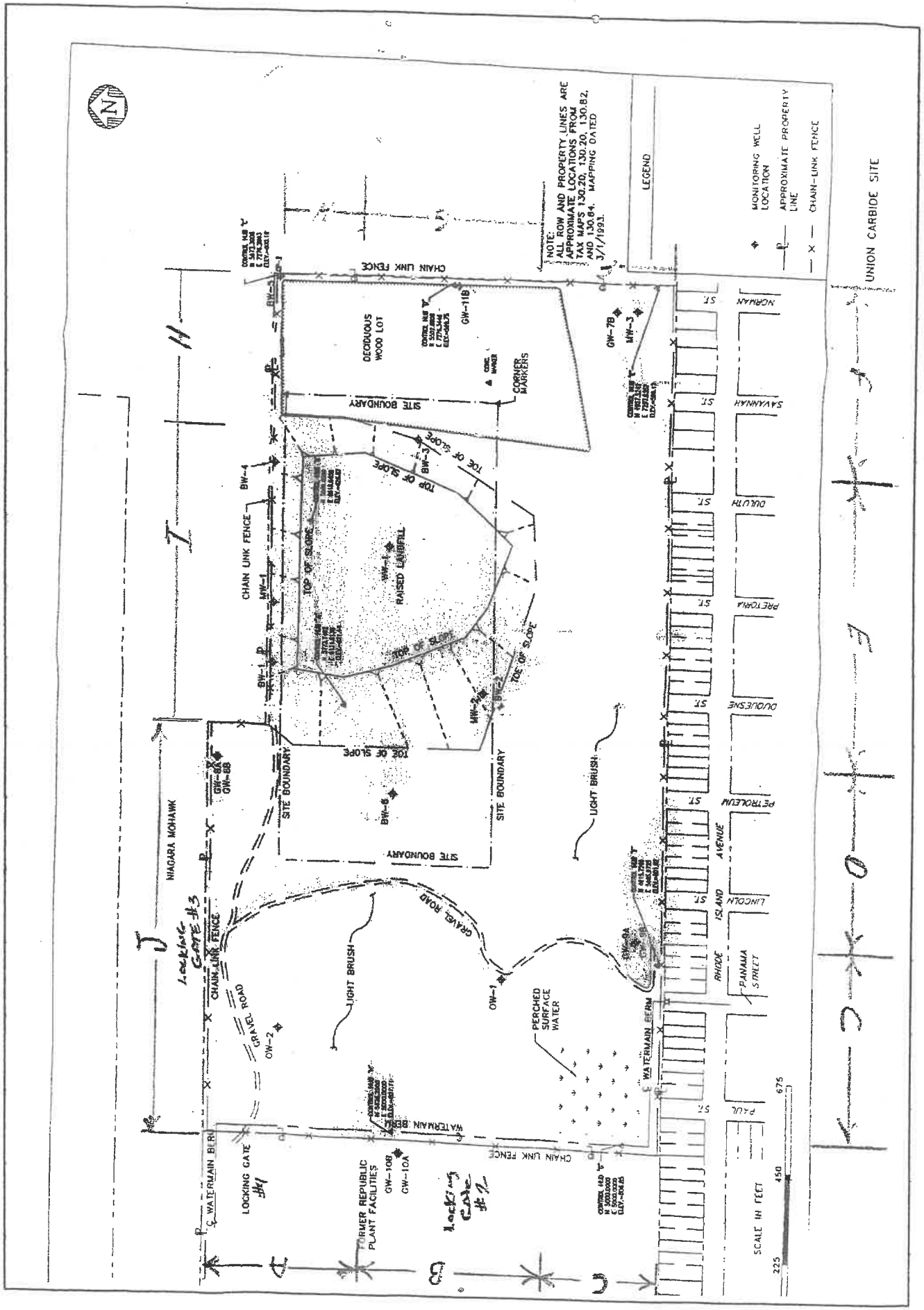
OK

RECORD THE DATE(S) THAT THE ENTIRE CAP WAS MOWED: _____

IN THE EVENT THAT ANY SIGN OF A SITE SECURITY BREACH IS IDENTIFIED DURING THE ABOVE SITE INSPECTIONS, COMPLETE A FULL GROUNDWATER MONITORING WELL INSPECTION AND DOCUMENT RESULTS USING THE QUARTERLY GROUNDWATER WELL INSPECTION REPORT FORM (APPENDIX B) AND ATTACH TO THIS FORM.

Employee

Date 10/24



APPENDIX A - WEEKLY GENERAL LANDFILL AND SITE SECURITY INSPECTION REPORT

Date	Time	Inspector Name
11/1/21	12:00 pm	John Swearengen

FENCE AREA	OK	DAMAGED	REPAIR DATE	REMARKS
A	✓			
B	✓			
C	✓			
D	✓			
E	✓			
F	✓			
G	✓			
H	✓			
I	✓			
J	✓			

GATE	OK	DAMAGED	REPAIR DATE	REMARKS
1	✓			
2	✓			
3	✓			

SECURITY-RELATED ENGINEERED CONTROLS COMMENTS: (Check for condition, damage, signs of security breach)

all good

CAP COMMENTS: (Check for erosion and adequate vegetation)

all good

SURROUNDING AREA COMMENTS: (Check for condition, damage, signs of security breach)

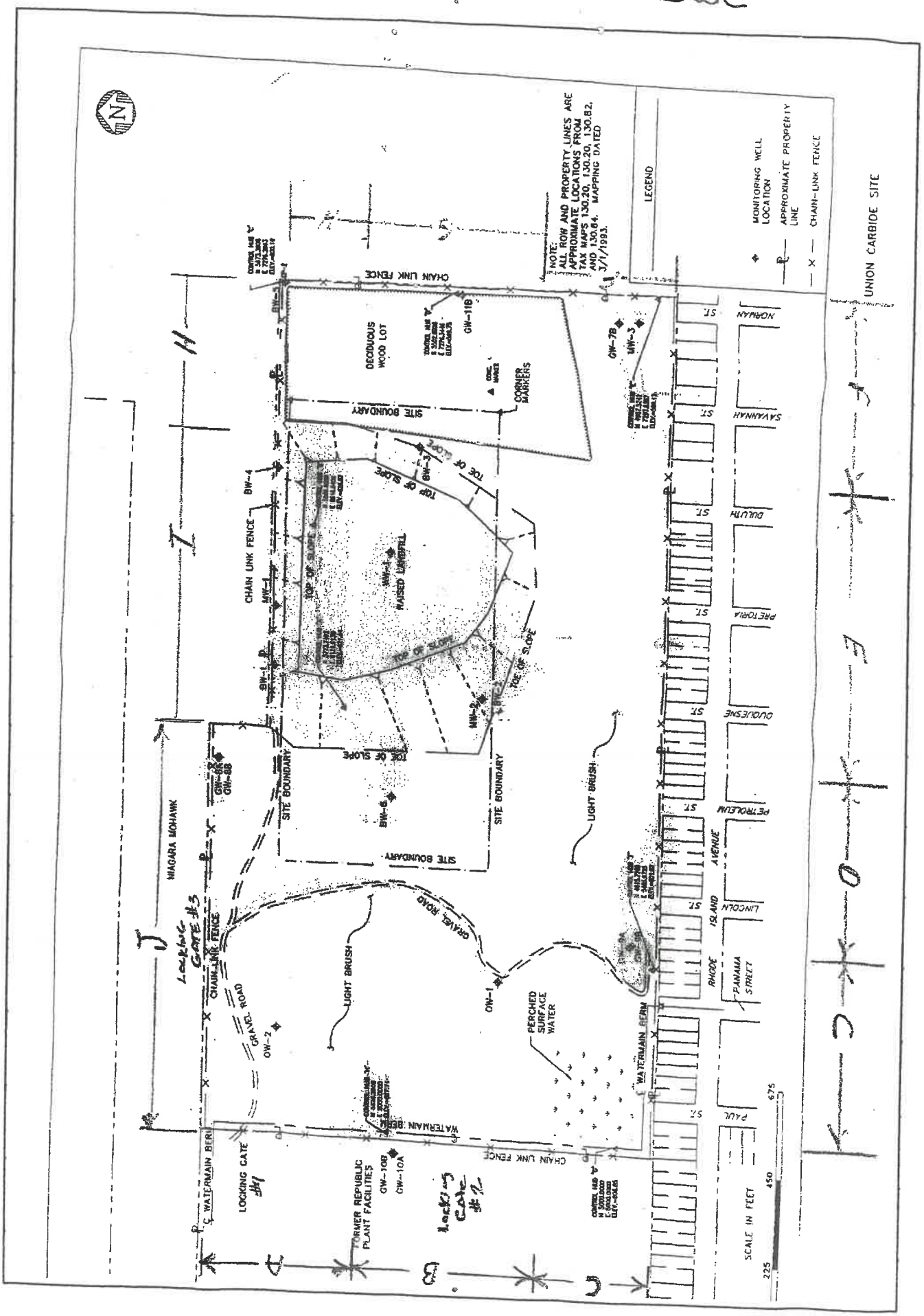
all good

RECORD THE DATE(S) THAT THE ENTIRE CAP WAS MOWED: ____________________

IN THE EVENT THAT ANY SIGN OF A SITE SECURITY BREACH IS IDENTIFIED DURING THE ABOVE SITE INSPECTIONS, COMPLETE A FULL GROUNDWATER MONITORING WELL INSPECTION AND DOCUMENT RESULTS USING THE QUARTERLY GROUNDWATER WELL INSPECTION REPORT FORM (APPENDIX B) AND ATTACH TO THIS FORM.

John
Employee

11/1
Date



APPENDIX A - WEEKLY GENERAL LANDFILL AND SITE SECURITY INSPECTION REPORT

Date	Time	Inspector Name
11/9/21	12:00pm	[illegible signature]

FENCE AREA	OK	DAMAGED	REPAIR DATE	REMARKS
A	✓			
B	✓			
C	✓			
D	✓			
E	✓			
F	✓			
G	✓			
H	✓			
I	✓			
J				

GATE	OK	DAMAGED	REPAIR DATE	REMARKS
1	✓			
2	✓			
3	✓			

SECURITY-RELATED ENGINEERED CONTROLS COMMENTS: (Check for condition, damage, signs of security breach)

all good

CAP COMMENTS: (Check for erosion and adequate vegetation)

all good

SURROUNDING AREA COMMENTS: (Check for condition, damage, signs of security breach)

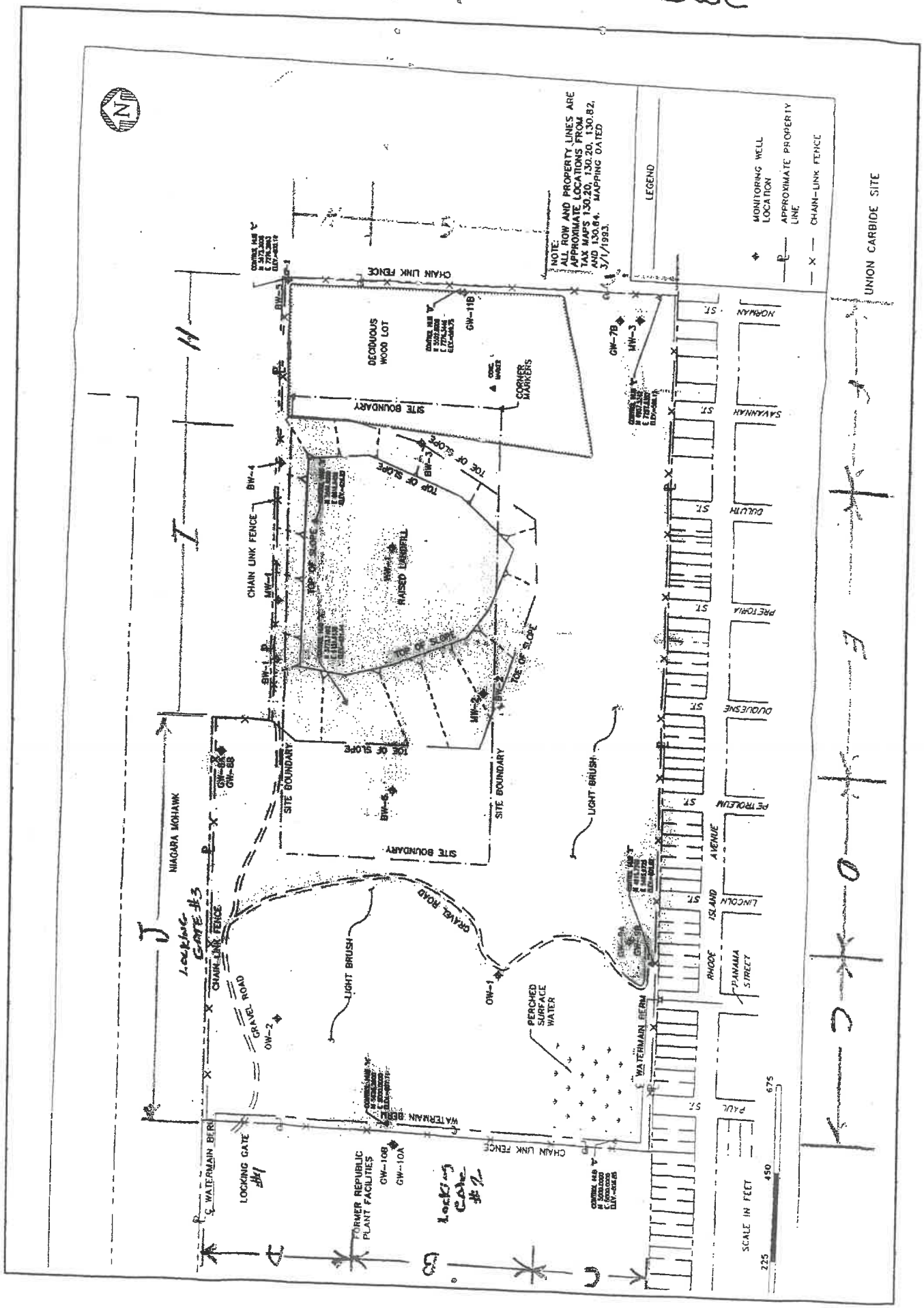
all good

RECORD THE DATE(S) THAT THE ENTIRE CAP WAS MOWED:____________

IN THE EVENT THAT ANY SIGN OF A SITE SECURITY BREACH IS IDENTIFIED DURING THE ABOVE SITE INSPECTIONS, COMPLETE A FULL GROUNDWATER MONITORING WELL INSPECTION AND DOCUMENT RESULTS USING THE QUARTERLY GROUNDWATER WELL INSPECTION REPORT FORM (APPENDIX B) AND ATTACH TO THIS FORM.

John
Employee

11/9
Date



APPENDIX A - WEEKLY GENERAL LANDFILL AND SITE SECURITY INSPECTION REPORT

Date	Time	Inspector Name
11/14/21	2:00 pm	John Swearingen

ENCE ARE	OK	DAMAGED	REPAIR DATE	REMARKS
A	✓			
B	✓			
C	✓			
D	✓			
E	✓			
F	✓			
G	✓			
H	✓			
I	✓			
J	✓			

GATE	OK	DAMAGED	REPAIR DATE	REMARKS
1	✓			
2	✓			
3	✓			

SECURITY-RELATED ENGINEERED CONTROLS COMMENTS: (Check for condition, damage, signs of security breach)

all good

CAP COMMENTS: (Check for erosion and adequate vegetation)

all good

SURROUNDING AREA COMMENTS: (Check for condition, damage, signs of security breach)

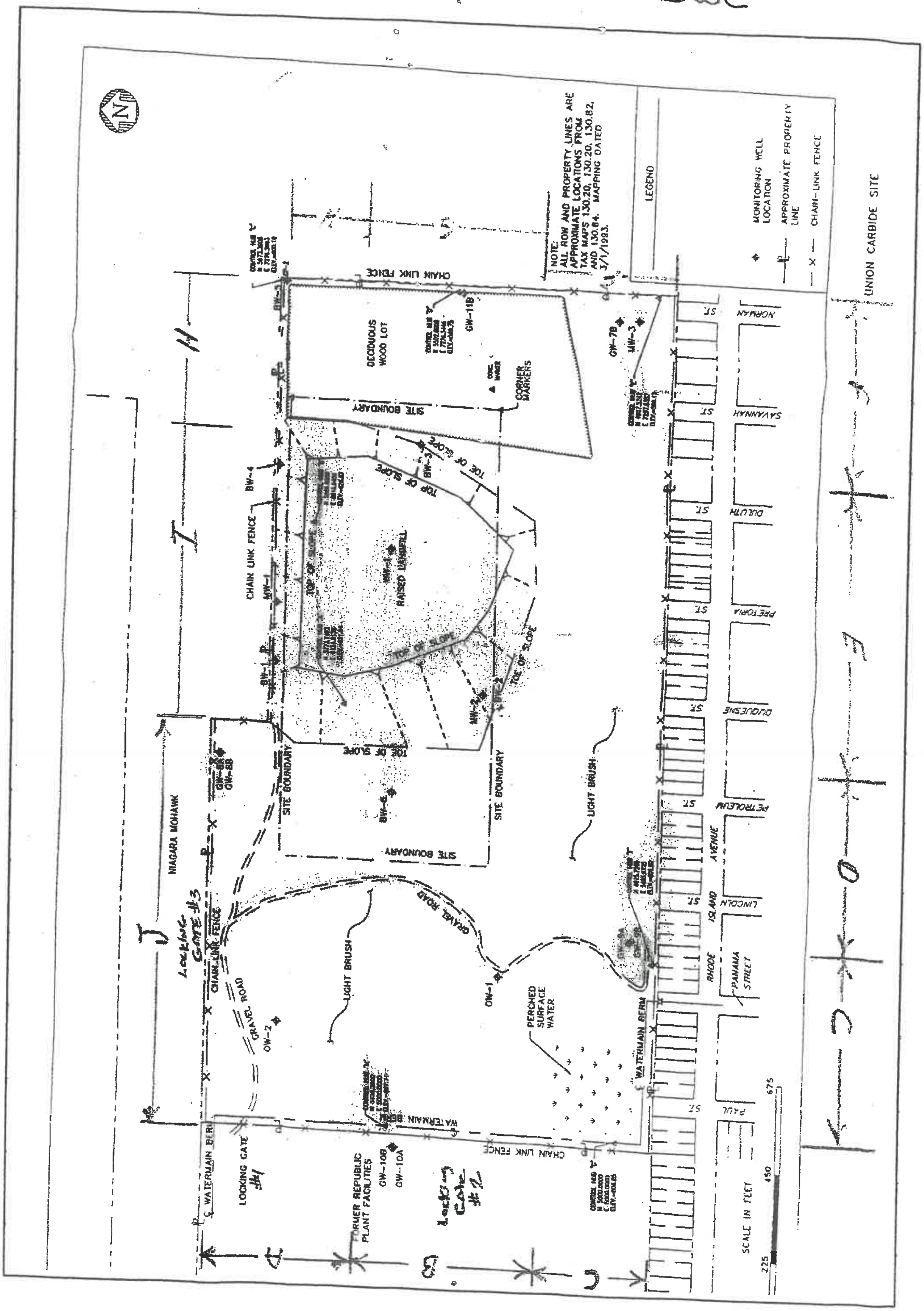
all good

RECORD THE DATE(S) THAT THE ENTIRE CAP WAS MOWED: _____

IN THE EVENT THAT ANY SIGN OF A SITE SECURITY BREACH IS IDENTIFIED DURING THE ABOVE SITE INSPECTIONS, COMPLETE A FULL GROUNDWATER MONITORING WELL INSPECTION AND DOCUMENT RESULTS USING THE QUARTERLY GROUNDWATER WELL INSPECTION REPORT FORM (APPENDIX B) AND ATTACH TO THIS FORM.

John
Employee

11/14
Date



APPENDIX A - WEEKLY GENERAL LANDFILL AND SITE SECURITY INSPECTION REPORT

Date	Time	Inspector Name
11/8/21	4:00pm	John Sweeringen

ENCE ARE	OK	DAMAGED	REPAIR DATE	REMARKS
A	✓			
B	✓			
C	✓			
D	✓			
E	✓			
F	✓			
G	✓			
H	✓			
I	✓			
J	✓			

GATE	OK	DAMAGED	REPAIR DATE	REMARKS
1	✓			
2	✓			
3	✓			

SECURITY-RELATED ENGINEERED CONTROLS COMMENTS: (Check for condition, damage, signs of security breach)

all good

CAP COMMENTS: (Check for erosion and adequate vegetation)

all good

SURROUNDING AREA COMMENTS: (Check for condition, damage, signs of security breach)

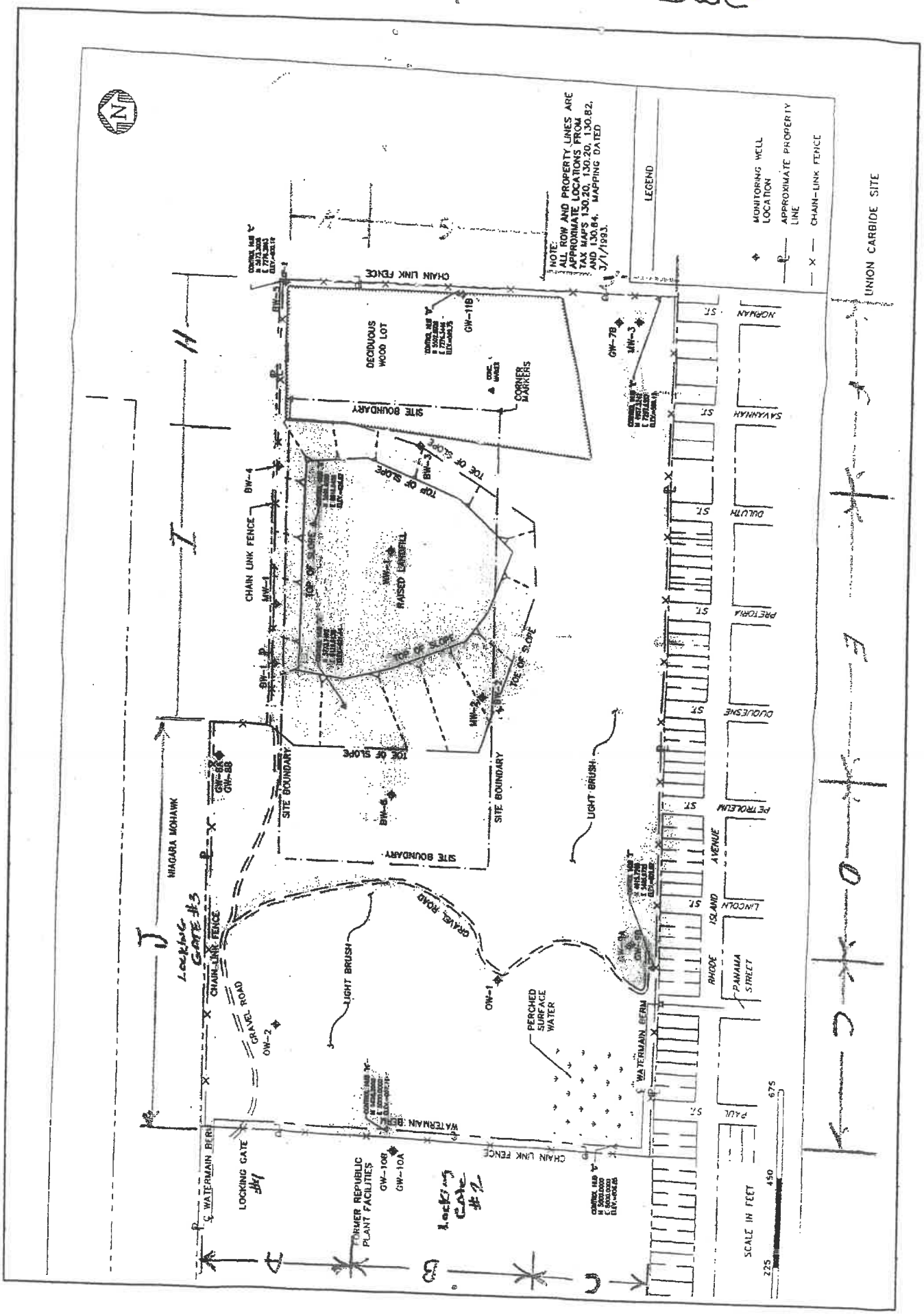
all good

RECORD THE DATE(S) THAT THE ENTIRE CAP WAS MOWED:_____

IN THE EVENT THAT ANY SIGN OF A SITE SECURITY BREACH IS IDENTIFIED DURING THE ABOVE SITE INSPECTIONS, COMPLETE A FULL GROUNDWATER MONITORING WELL INSPECTION AND DOCUMENT RESULTS USING THE QUARTERLY GROUNDWATER WELL INSPECTION REPORT FORM (APPENDIX B) AND ATTACH TO THIS FORM.

John
Employee

11/19
Date



APPENDIX A - WEEKLY GENERAL LANDFILL AND SITE SECURITY INSPECTION REPORT

Date	Time	Inspector Name
11/28/21	3:00	John Swearengen

ENCE ARE.	OK	DAMAGED	REPAIR DATE	REMARKS
A	✓			
B	✓			
C	✓			
D	✓			
E	✓			
F	✓			
G	✓			
H	✓			
I	✓			
J	✓			

GATE	OK	DAMAGED	REPAIR DATE	REMARKS
1	✓			
2	✓			
3	✓			

SECURITY-RELATED ENGINEERED CONTROLS COMMENTS: (Check for condition, damage, signs of security breach)

all good

CAP COMMENTS: (Check for erosion and adequate vegetation)

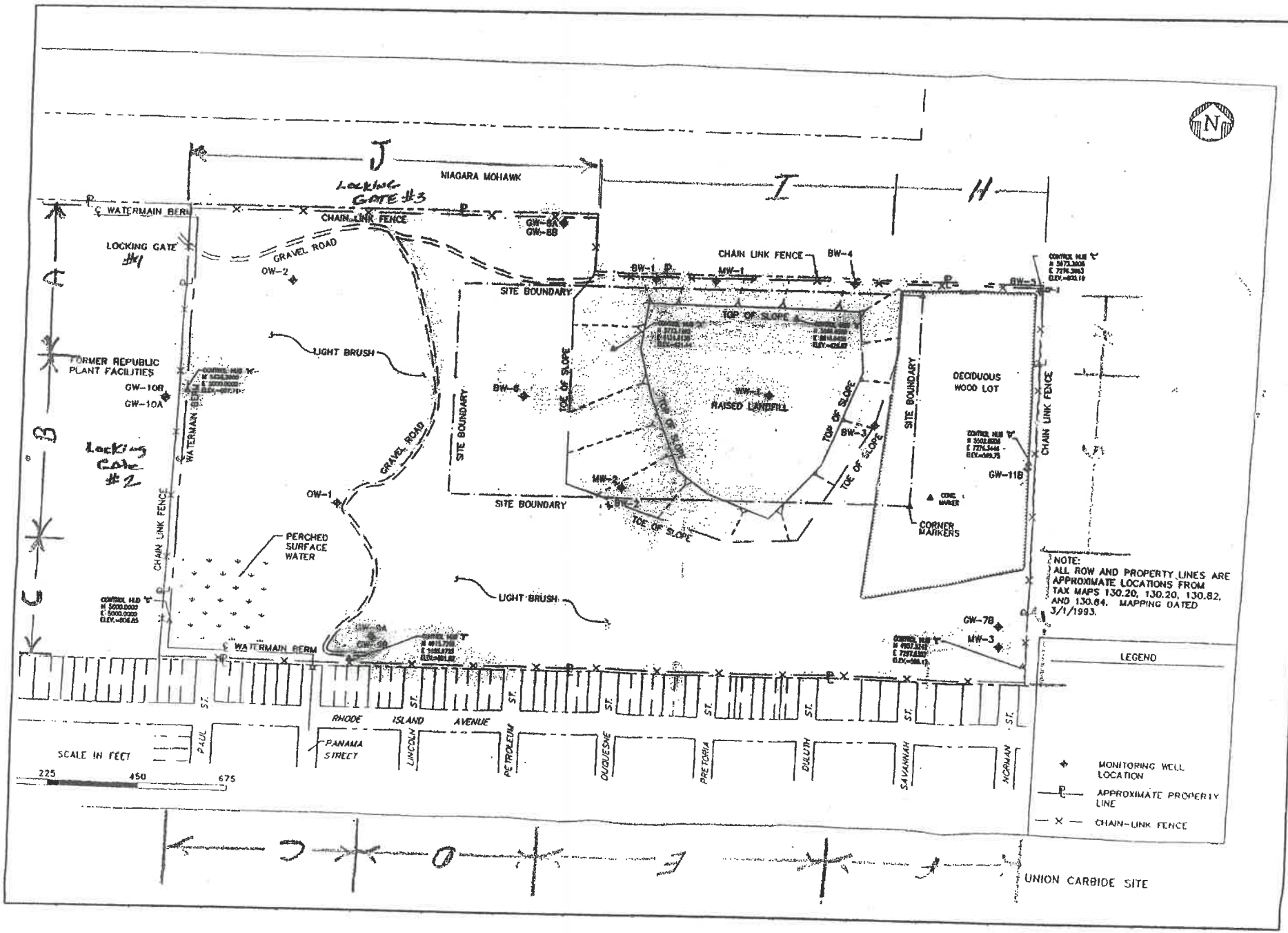
all good

SURROUNDING AREA COMMENTS: (Check for condition, damage, signs of security breach)

all good

RECORD THE DATE(S) THAT THE ENTIRE CAP WAS MOWED:_____

IN THE EVENT THAT ANY SIGN OF A SITE SECURITY BREACH IS IDENTIFIED DURING THE ABOVE SITE INSPECTIONS, COMPLETE A FULL GROUNDWATER MONITORING WELL INSPECTION AND DOCUMENT RESULTS USING THE QUARTERLY GROUNDWATER WELL INSPECTION REPORT FORM (APPENDIX B) AND ATTACH TO THIS FORM.



John
Employee

11/28
Date

APPENDIX A - WEEKLY GENERAL LANDFILL AND SITE SECURITY INSPECTION REPORT

Date	Time	Inspector Name
12/6/21	4:00	John Sakaleyan

ENCE ARE	OK	DAMAGED	REPAIR DATE	REMARKS
A	✓			
B	✓			
C	✓			
D	✓			
E	✓			
F	✓			
G	✓			
H	✓			
I	✓			
J	✓			

GATE	OK	DAMAGED	REPAIR DATE	REMARKS
1	✓			
2	✓			
3	✓			

SECURITY-RELATED ENGINEERED CONTROLS COMMENTS: (Check for condition, damage, signs of security breach)

all good

CAP COMMENTS: (Check for erosion and adequate vegetation)

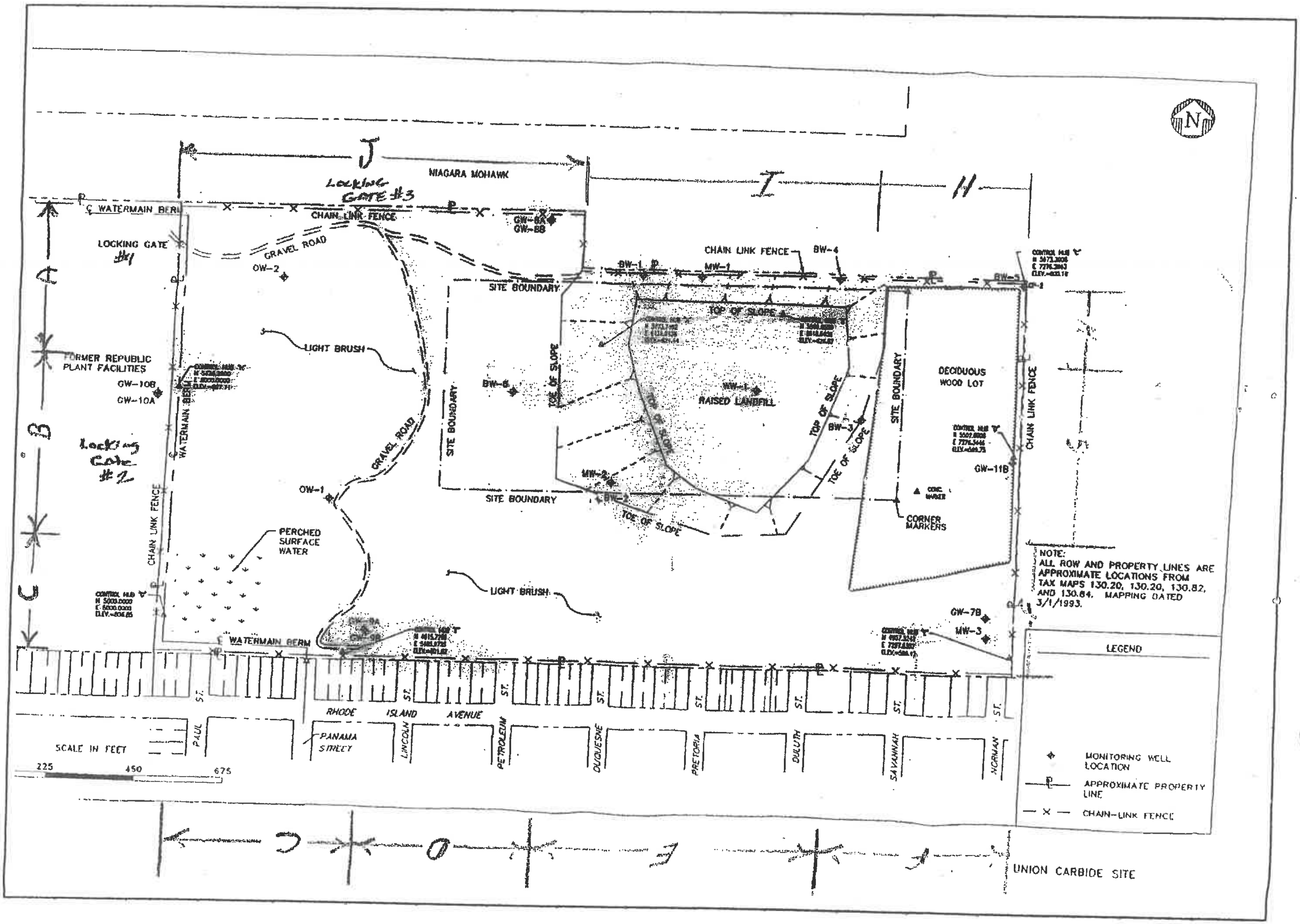
all good

SURROUNDING AREA COMMENTS: (Check for condition, damage, signs of security breach)

all good

RECORD THE DATE(S) THAT THE ENTIRE CAP WAS MOWED:_____

IN THE EVENT THAT ANY SIGN OF A SITE SECURITY BREACH IS IDENTIFIED DURING THE ABOVE SITE INSPECTIONS, COMPLETE A FULL GROUNDWATER MONITORING WELL INSPECTION AND DOCUMENT RESULTS USING THE QUARTERLY GROUNDWATER WELL INSPECTION REPORT FORM (APPENDIX B) AND ATTACH TO THIS FORM.



12/6/21
Date

John S
Employee

APPENDIX A - WEEKLY GENERAL LANDFILL AND SITE SECURITY INSPECTION REPORT

Date	Time	Inspector Name
12/11/21	3:30	John Sucolongue

ENCE ARE	OK	DAMAGED	REPAIR DATE	REMARKS
A	✓			
B	✓			
C	✓			
D	✓			
E	✓			
F	✓			
G	✓			
H	✓			
I	✓			
J	✓			

GATE	OK	DAMAGED	REPAIR DATE	REMARKS
1	✓			
2	✓			
3	✓			

SECURITY-RELATED ENGINEERED CONTROLS COMMENTS: (Check for condition, damage, signs of security breach)

all good

CAP COMMENTS: (Check for erosion and adequate vegetation)

all good

SURROUNDING AREA COMMENTS: (Check for condition, damage, signs of security breach)

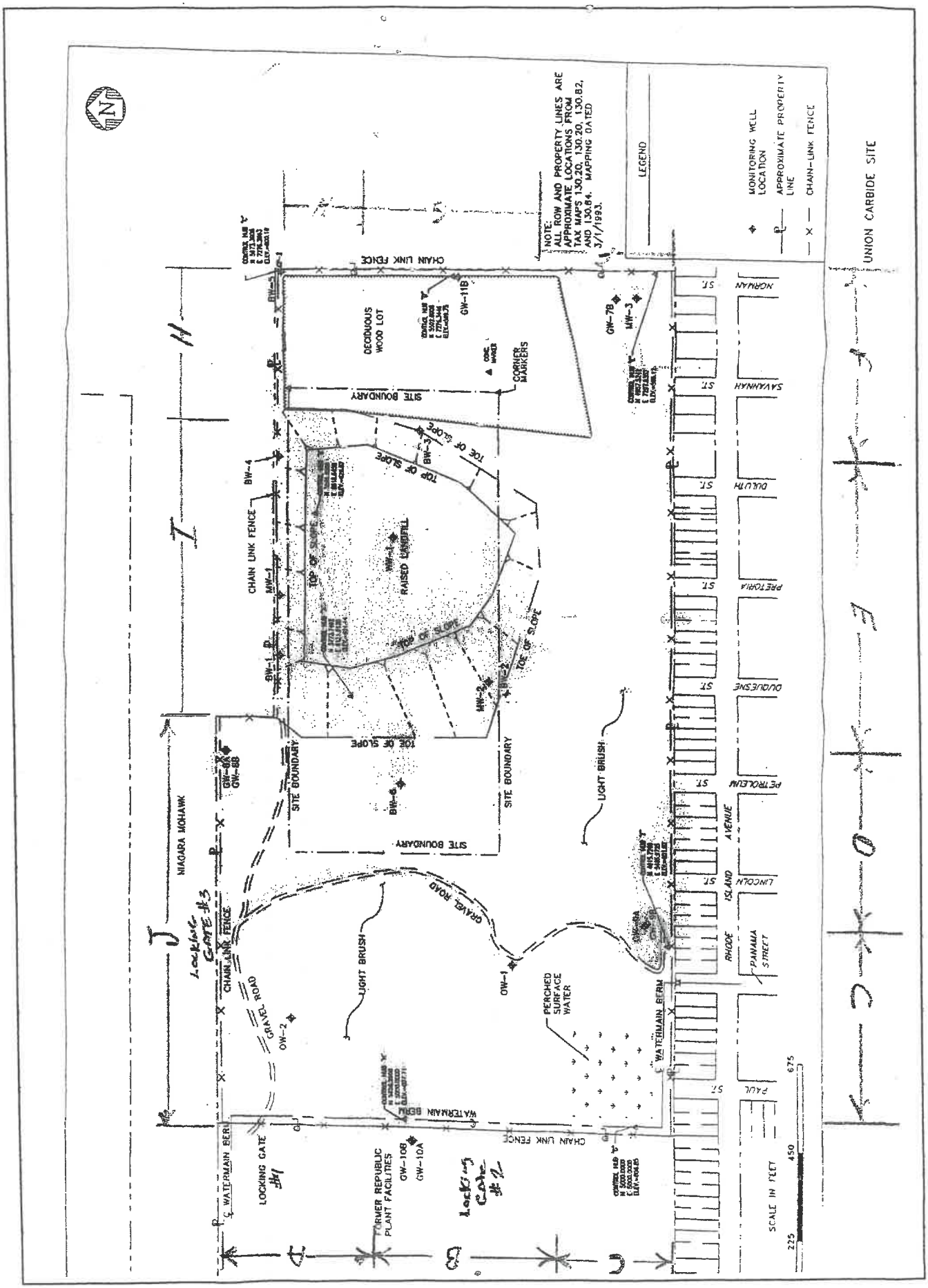
all good

RECORD THE DATE(S) THAT THE ENTIRE CAP WAS MOWED:_____

IN THE EVENT THAT ANY SIGN OF A SITE SECURITY BREACH IS IDENTIFIED DURING THE ABOVE SITE INSPECTIONS, COMPLETE A FULL GROUNDWATER MONITORING WELL INSPECTION AND DOCUMENT RESULTS USING THE QUARTERLY GROUNDWATER WELL INSPECTION REPORT FORM (APPENDIX B) AND ATTACH TO THIS FORM.

John
Employee

12/11/21
Date



APPENDIX A - WEEKLY GENERAL LANDFILL AND SITE SECURITY INSPECTION REPORT

Date	Time	Inspector Name
12/17/21	4:00	John Schadegger

ENCE ARE	OK	DAMAGED	REPAIR DATE	REMARKS
A	✓			
B	✓			
C	✓			
D	✓			
E	✓			
F	✓			
G	✓			
H		Tree fell on fence	12/18/21	
I	✓			
J	✓			

GATE	OK	DAMAGED	REPAIR DATE	REMARKS
1	✓			
2	✓			
3	✓			

SECURITY-RELATED ENGINEERED CONTROLS COMMENTS: (Check for condition, damage, signs of security breach)

all good

CAP COMMENTS: (Check for erosion and adequate vegetation)

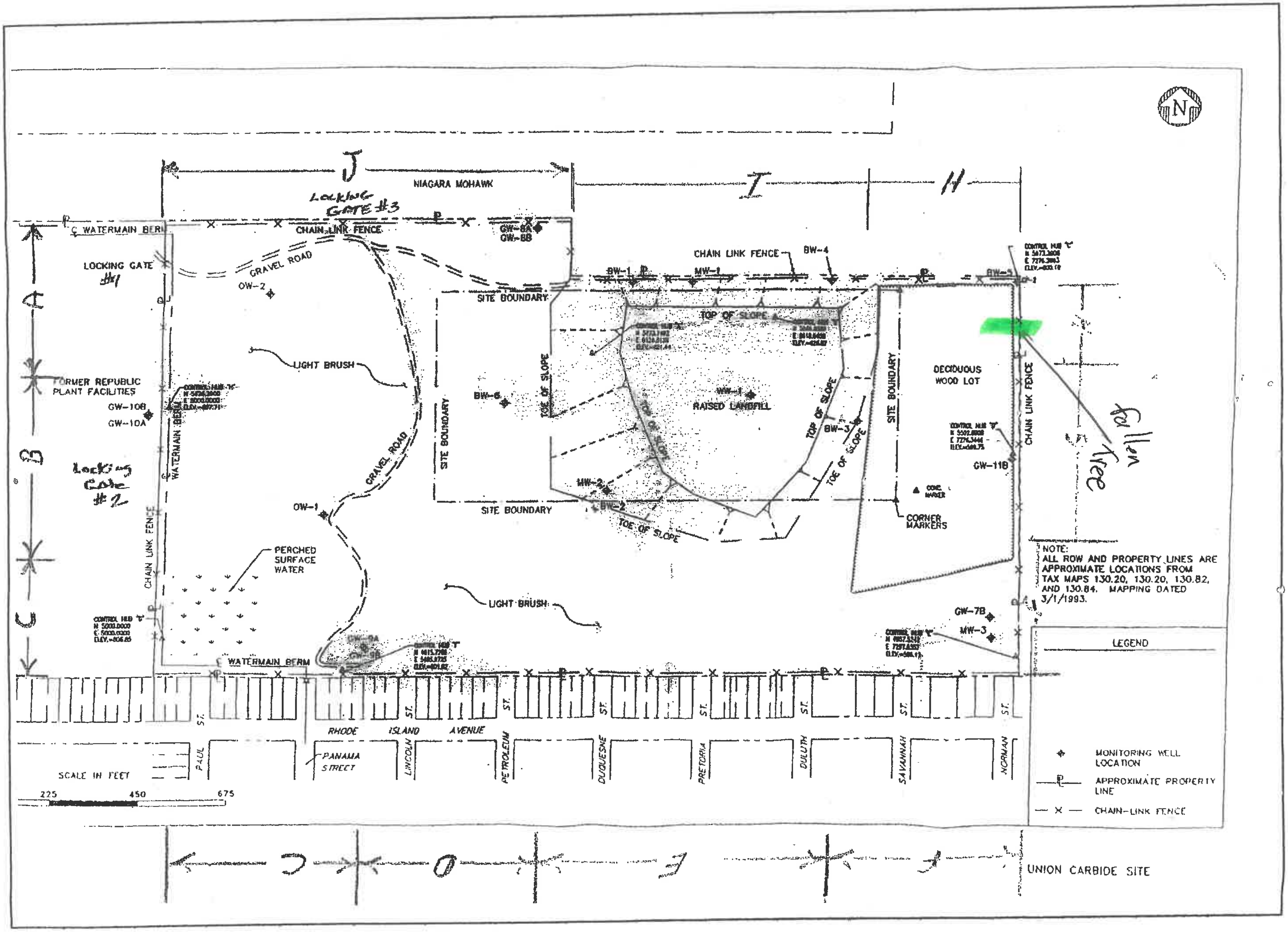
all good

SURROUNDING AREA COMMENTS: (Check for condition, damage, signs of security breach)

all good

RECORD THE DATE(S) THAT THE ENTIRE CAP WAS MOWED:_____

IN THE EVENT THAT ANY SIGN OF A SITE SECURITY BREACH IS IDENTIFIED DURING THE ABOVE SITE INSPECTIONS, COMPLETE A FULL GROUNDWATER MONITORING WELL INSPECTION AND DOCUMENT RESULTS USING THE QUARTERLY GROUNDWATER WELL INSPECTION REPORT FORM (APPENDIX B) AND ATTACH TO THIS FORM.



Employee: John Sweatenyth

Date: 12/17/21

APPENDIX A - WEEKLY GENERAL LANDFILL AND SITE SECURITY INSPECTION REPORT

Date	Time	Inspector Name
12/26/21	2:00 pm	John Swealegan

ENCE ARE	OK	DAMAGED	REPAIR DATE	REMARKS
A	✓			
B	✓			
C	✓			
D	✓			
E	✓			
F	✓			
G	✓			
H	✓			
I	✓			
J	✓			

GATE	OK	DAMAGED	REPAIR DATE	REMARKS
1	✓			
2	✓			
3	✓			

SECURITY-RELATED ENGINEERED CONTROLS COMMENTS: (Check for condition, damage, signs of security breach)

all good

CAP COMMENTS: (Check for erosion and adequate vegetation)

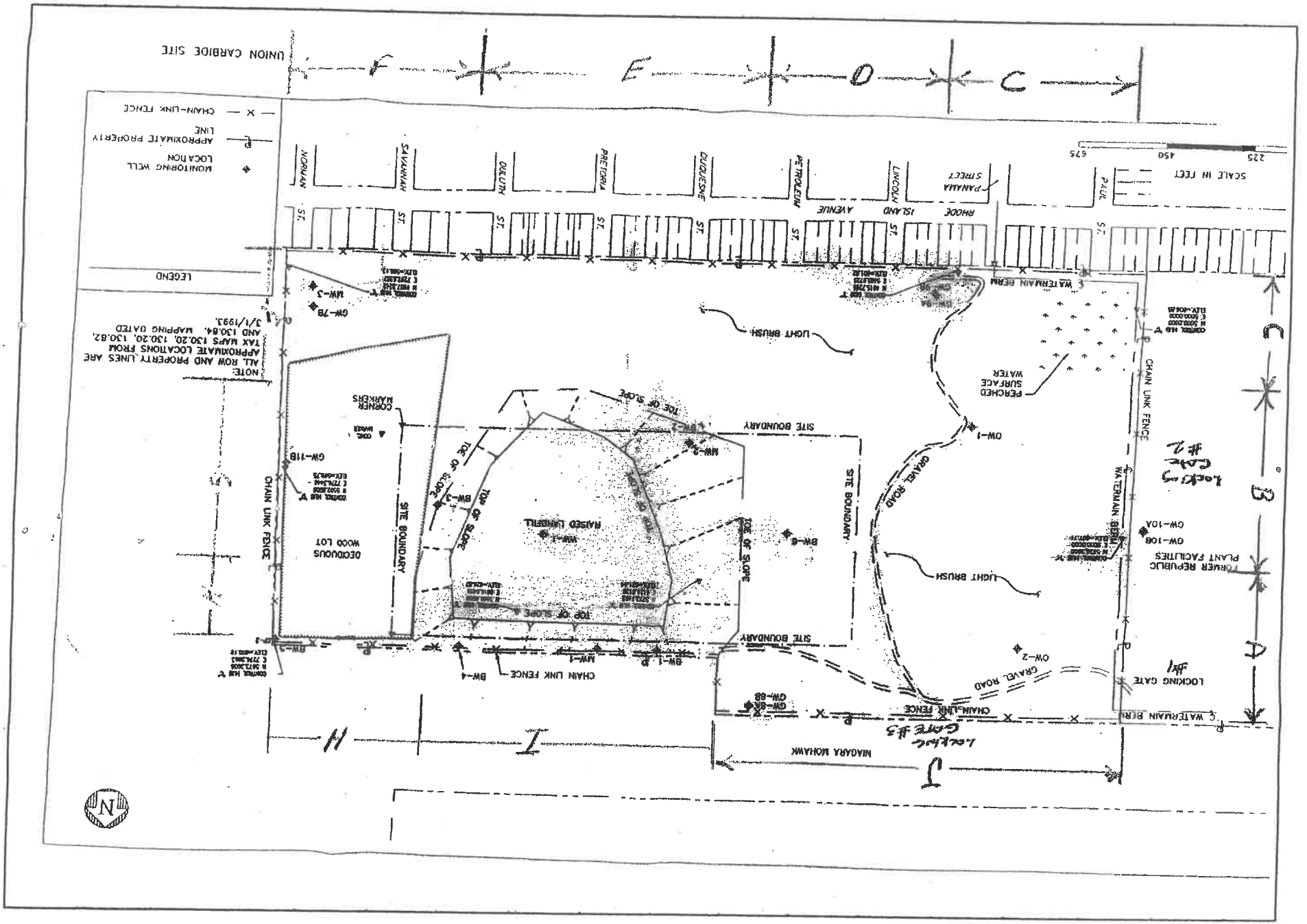
all good

SURROUNDING AREA COMMENTS: (Check for condition, damage, signs of security breach)

all good

RECORD THE DATE(S) THAT THE ENTIRE CAP WAS MOWED:_____

IN THE EVENT THAT ANY SIGN OF A SITE SECURITY BREACH IS IDENTIFIED DURING THE ABOVE SITE INSPECTIONS, COMPLETE A FULL GROUNDWATER MONITORING WELL INSPECTION AND DOCUMENT RESULTS USING THE QUARTERLY GROUNDWATER WELL INSPECTION REPORT FORM (APPENDIX B) AND ATTACH TO THIS FORM.



12/26/24
Date

Employee

APPENDIX A - WEEKLY GENERAL LANDFILL AND SITE SECURITY INSPECTION REPORT

Date	Time	Inspector Name
12/31/21	3:00	John Sweaitenga

ENCE ARE.	OK	DAMAGED	REPAIR DATE	REMARKS
A	✓			
B	✓			
C	✓			
D	✓			
E	✓			
F	✓			
G	✓			
H	✓			
I	✓			
J	✓			

GATE	OK	DAMAGED	REPAIR DATE	REMARKS
1	✓			
2	✓			
3	✓			

SECURITY-RELATED ENGINEERED CONTROLS COMMENTS: (Check for condition, damage, signs of security breach)

all good

CAP COMMENTS: (Check for erosion and adequate vegetation)

all good

SURROUNDING AREA COMMENTS: (Check for condition, damage, signs of security breach)

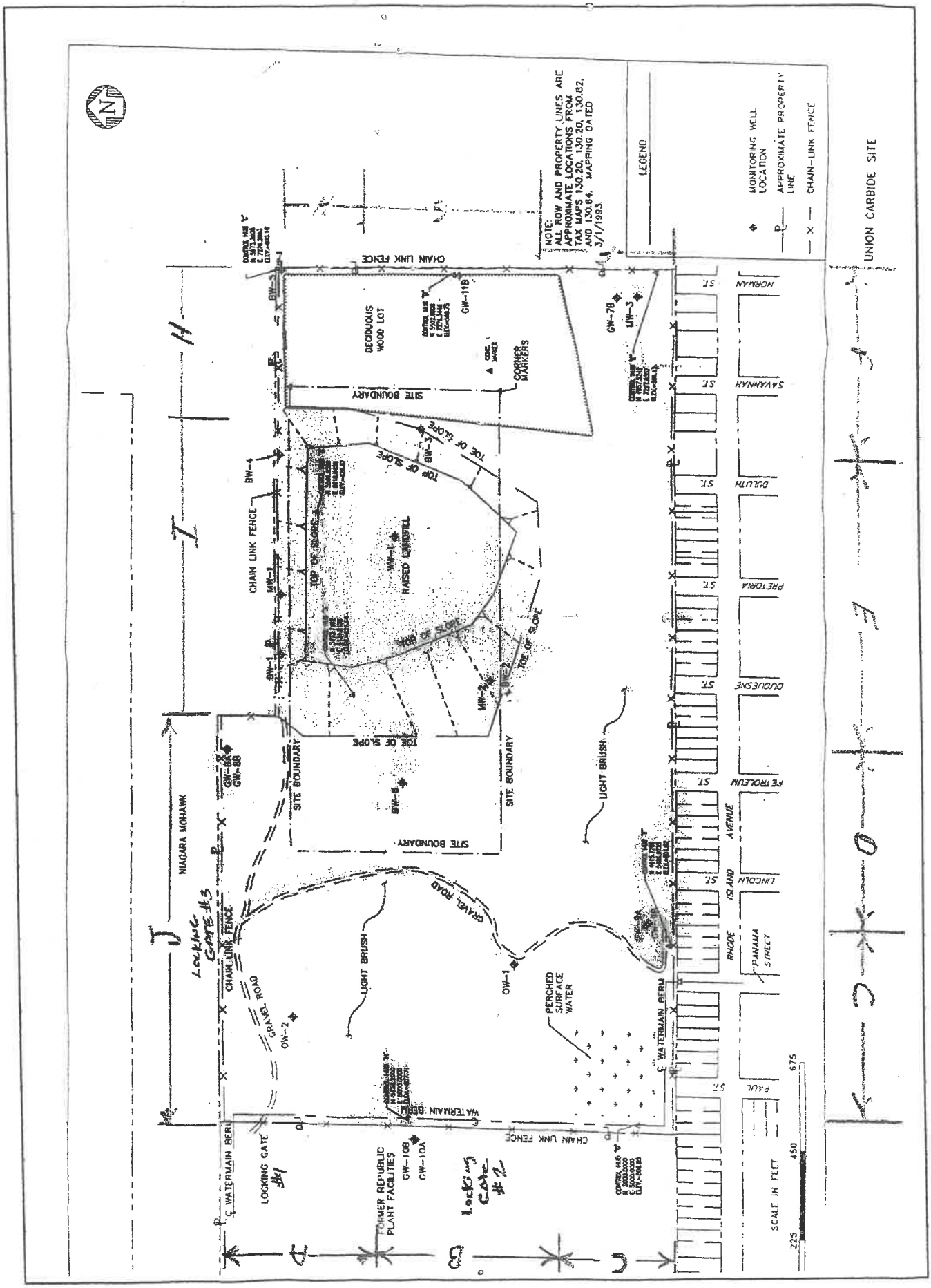
all good

RECORD THE DATE(S) THAT THE ENTIRE CAP WAS MOWED:_____

IN THE EVENT THAT ANY SIGN OF A SITE SECURITY BREACH IS IDENTIFIED DURING THE ABOVE SITE INSPECTIONS, COMPLETE A FULL GROUNDWATER MONITORING WELL INSPECTION AND DOCUMENT RESULTS USING THE QUARTERLY GROUNDWATER WELL INSPECTION REPORT FORM (APPENDIX B) AND ATTACH TO THIS FORM.

John S
Employee

12/31
Date



Appendix G

Copies of Quarterly Groundwater Well Inspection Reports – 2021

APPENDIX B - QUARTERLY GROUNDWATER WELL INSPECTION REPORT

Tom Sweeney

GRAFTECH WELLS

3/6/21

WELL I.D. NUMBER	WELL I.D. TAG INTACT (YES/NO)	LOCK CONDITION	OUTER CASING CONDITION	CONCRETE SEAL CONDITION	COMMENTS
MW1-78	yes	good	good	good	
MW2-78	yes	good	good	good	
MW3-79	yes	good	good	good	
BW1-86	yes	good	good	good	
BW2-86	yes	good	good	good	
BW3-86	yes	good	good	Not visable	
BW4-86	yes	good	good	good	
BW5-86	yes	good	good	cracked	
BW6-86	yes	good	good	cracked	
WW1-86	yes	good	good	Not visable	
OW1-88	yes	good	good	Not visable	
OW2-88	yes	good	good	Not visable	

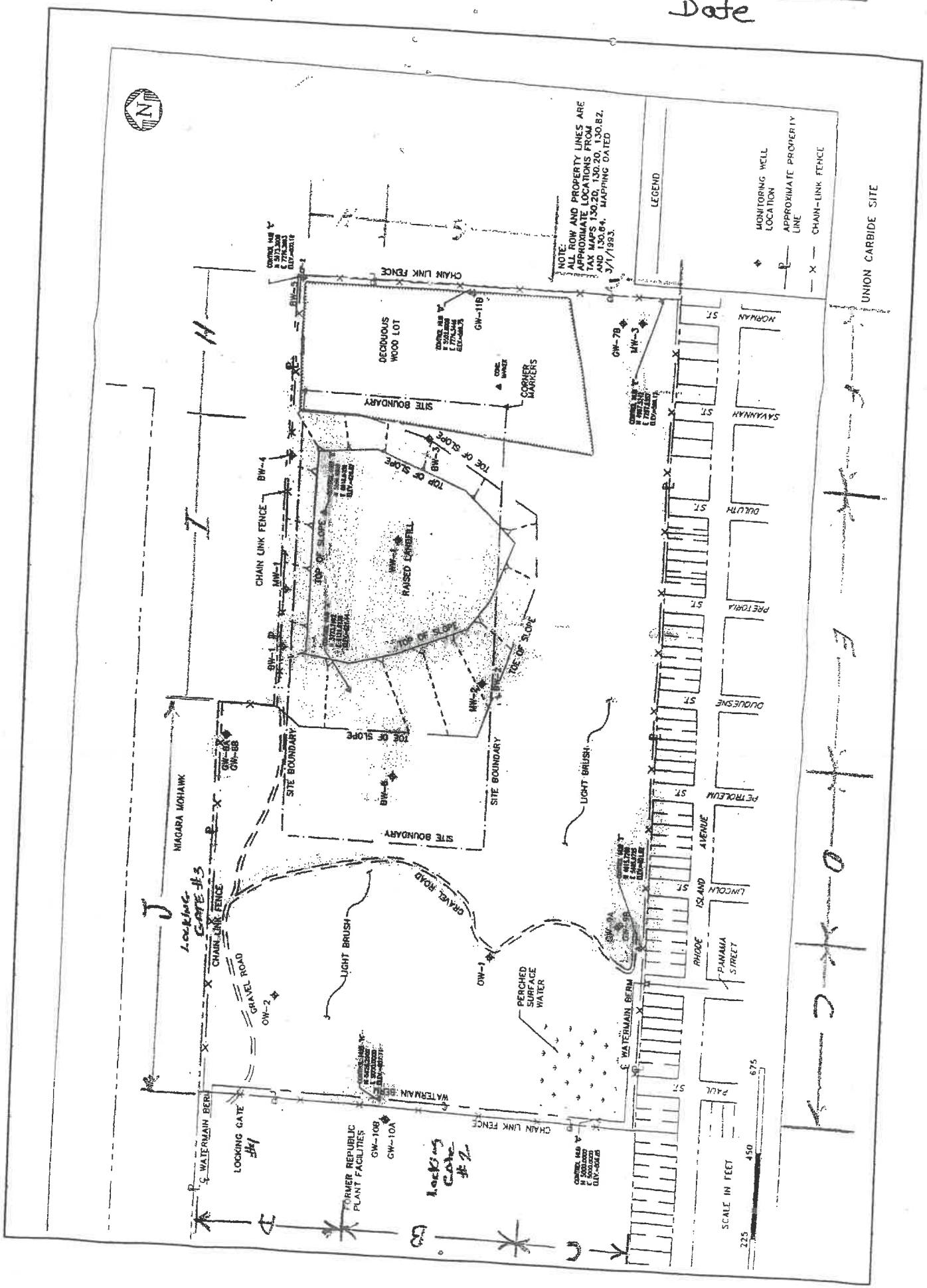
ON-SITE WELLS INSTALLED BY NYSDEC

(Installed Sept./Oct. 93)

WELL I.D. NUMBER	WELL I.D. TAG INTACT (YES/NO)	LOCK CONDITION	OUTER CASING CONDITION	CONCRETE SEAL CONDITION	COMMENTS
GW7B-93	yes	good	good	lose	
GW8A-93	yes	good	good	lose	
GW8B-93	yes	good	good	good	
GW9A-93	yes	good	good	lose	
GW9B-93	yes	good	good	lose	
GW11B-93	yes	good	good	good	

John
Employee

3/6/21
Date



APPENDIX B - QUARTERLY GROUNDWATER WELL INSPECTION REPORT

GRAFTECH WELLS

5/22/21

WELL I.D. NUMBER	WELL I.D. TAG INTACT (YES/NO)	LOCK CONDITION	OUTER CASING CONDITION	CONCRETE SEAL CONDITION	COMMENTS
MW1-78	yes	good	good	good	
MW2-78	yes	good	good	good	
MW3-79	yes	good	good	good	
BW1-86	yes	good	good	good	
BW2-86	yes	good	good	good	
BW3-86	yes	good	good	Not Visible	
BW4-86	yes	good	good	good	
BW5-86	yes	good	good	crack	
BW6-86	yes	good	good	crack	
WW1-86	yes	good	good	Not Visible	
OW1-88	yes	good	good	Not Visible	
OW2-88	yes	good	good	Not Visible	

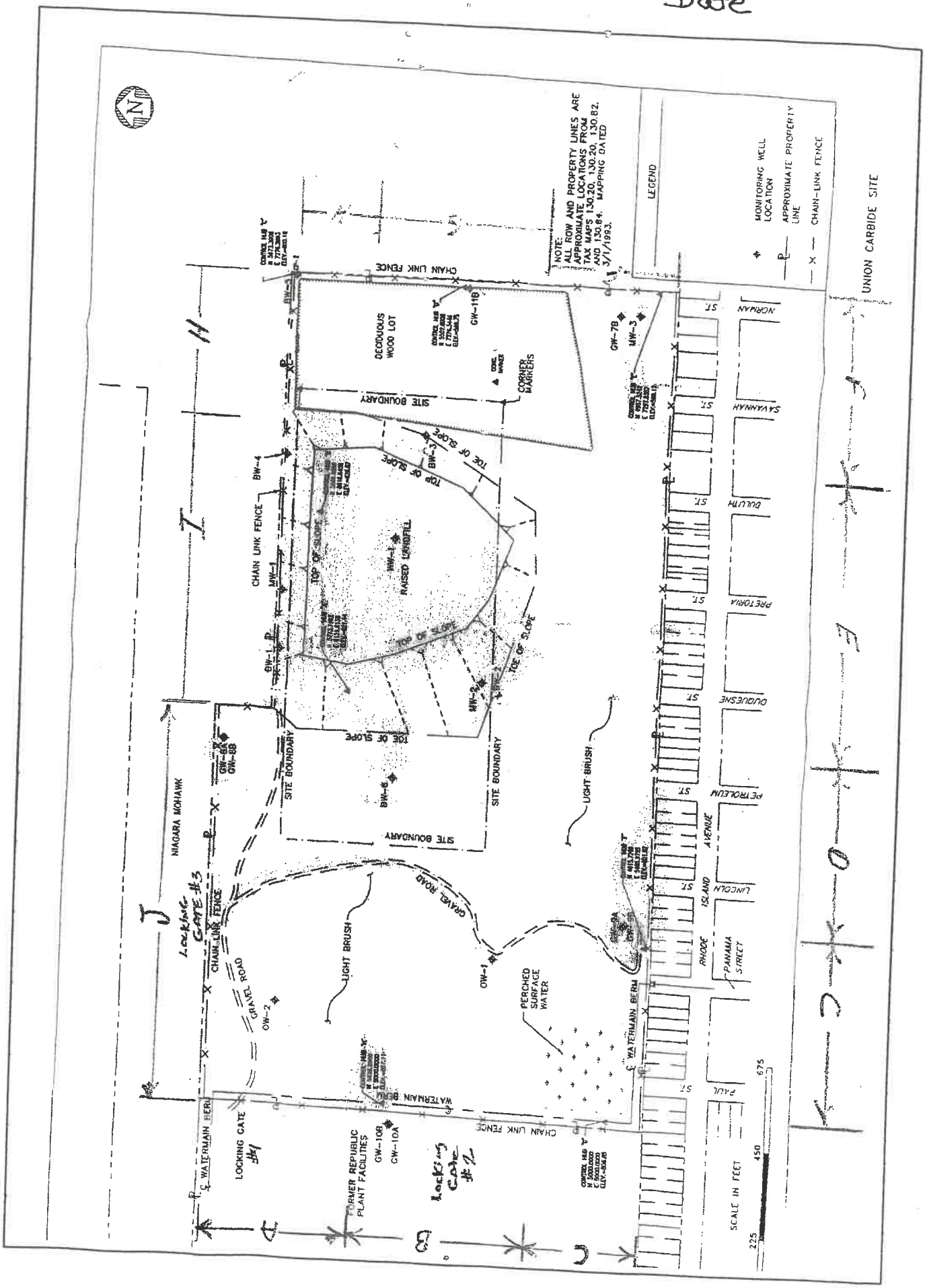
ON-SITE WELLS INSTALLED BY NYSDEC

(Installed Sept./Oct. 93)

WELL I.D. NUMBER	WELL I.D. TAG INTACT (YES/NO)	LOCK CONDITION	OUTER CASING CONDITION	CONCRETE SEAL CONDITION	COMMENTS
GW7B-93	yes	good	good	loose	
GW8A-93	yes	good	good	loose	
GW8B-93	yes	good	good	good	
GW9A-93	yes	good	good	loose	
GW9B-93	yes	good	good	loose	
GW11B-93	yes	good	good	good	

Erig
Employee

5/22/21
Date



APPENDIX B - QUARTERLY GROUNDWATER WELL INSPECTION REPORT

John Swaney

GRAFTECH WELLS

7/11/21

WELL I.D. NUMBER	WELL I.D. TAG INTACT (YES/NO)	LOCK CONDITION	OUTER CASING CONDITION	CONCRETE SEAL CONDITION	COMMENTS
MW1-78	yes	good	good	good	
MW2-78	yes	good	good	good	
MW3-79	yes	good	good	good	
BW1-86	yes	good	good	good	
BW2-86	yes	good	good	Not visable	
BW3-86	yes	good	good	Not visable	
BW4-86	No	good	good	good	
BW5-86	yes	good	good	cracked	
BW6-86	yes	good	good	cracked	
WW1-86	yes	good	good	Not visable	
OW1-88	yes	good	good	Not visable	
OW2-88	yes	good	good	Not visable	

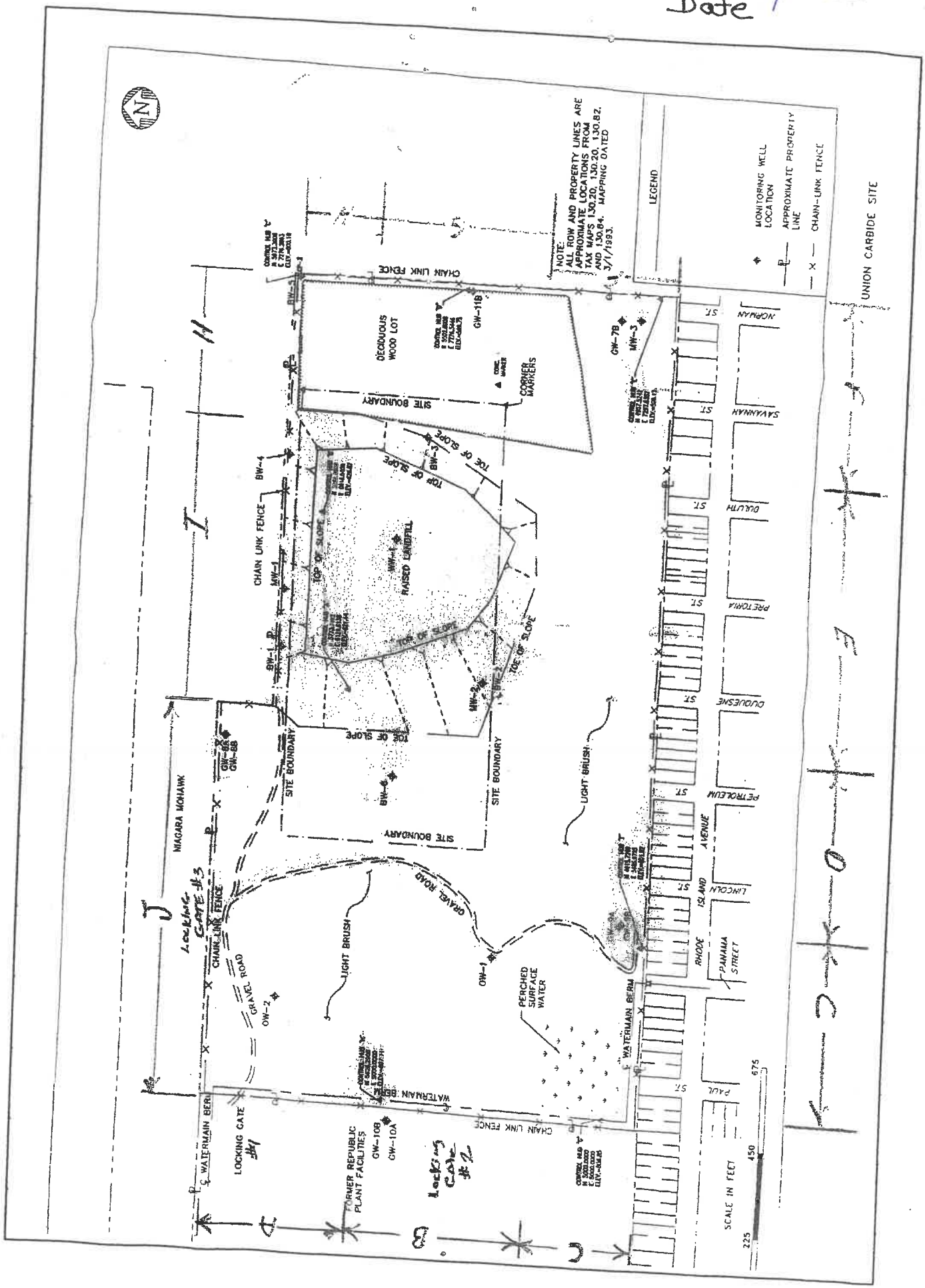
ON-SITE WELLS INSTALLED BY NYSDEC

(Installed Sept./Oct. 93)

WELL I.D. NUMBER	WELL I.D. TAG INTACT (YES/NO)	LOCK CONDITION	OUTER CASING CONDITION	CONCRETE SEAL CONDITION	COMMENTS
GW7B-93	yes	good	good	lose	
GW8A-93	yes	good	good	lose	
GW8B-93	yes	good	good	good	
GW9A-93	yes	good	good	lose	
GW9B-93	yes	good	good	lose	
GW11B-93	yes	good	good	good	

John
Employee

7/11/21
Date



APPENDIX B - QUARTERLY GROUNDWATER WELL INSPECTION REPORT

John Sweeney

GRAFTECH WELLS

11/5/21

WELL I.D. NUMBER	WELL I.D. TAG INTACT (YES/NO)	LOCK CONDITION	OUTER CASING CONDITION	CONCRETE SEAL CONDITION	COMMENTS
MW1-78	yes	good	good	good	
MW2-78	yes	good	good	good	
MW3-79	yes	good	good	good	
BW1-86	good	good	good	good	
BW2-86	~~yes~~ yes	good	good	good	
BW3-86	yes	good	good	Not visable	
BW4-86	NO	good	good	good	
BW5-86	yes	good	good	Cracked	
BW6-86	yes	good	good	cracked	
WW1-86	yes	good	good	Not visable	
OW1-88	yes	good	good	Not visable	
OW2-88	yes	locked	good	Not visable	

ON-SITE WELLS INSTALLED BY NYSDEC

(Installed Sept./Oct. 93)

WELL I.D. NUMBER	WELL I.D. TAG INTACT (YES/NO)	LOCK CONDITION	OUTER CASING CONDITION	CONCRETE SEAL CONDITION	COMMENTS
GW7B-93	yes	good	good	~~good~~	lose
GW8A-93	yes	locked	good	lose	
GW8B-93	yes	locked	good	good	
GW9A-93	yes	good	good	lose	
GW9B-93	yes	good	good	lose	
GW11B-93	yes	good	good	good	

John
Employee

11/5/21
Date