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January 27, 2023

Mr. Andrew Zwack  
Project Manager  
New York State Department of Environmental Conservation  
700 Delaware Ave.  
Buffalo, NY 14209

Subject: GrafTech International Holdings Inc.  
Site Number 932035  
Hyde Park Boulevard  
Niagara Falls, New York 14303

Dear Mr. Zwack:

GrafTech International Holdings Inc. (Graftech) is pleased to submit the Periodic Review Report (PRR) for Reporting Year 2022 for the GrafTech closed landfill site (Landfill), SWMF #32N03 (formerly Union Carbide Corporation, Carbon Products Division and UCAR Republic Site #932035).

Electronic copies (in an Adobe PDF file) of the cover letter and the PRR are being submitted to you by email only, in accordance with the established procedures and deadline per the State's Reminder Notice dated November 29, 2022.

If you have any questions or need additional information regarding the PRR, please contact me at (440) 724-9418 or [julianne.snyder@graftech.com](mailto:julianne.snyder@graftech.com).

Respectfully submitted,

A handwritten signature in black ink that reads "Julianne M. Snyder". The signature is written in a cursive, flowing style.

Julianne M. Snyder  
Corporate HS&EP Manager

Enclosure

**2022 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)**

**Prepared by:**  
**GrafTech International Holdings Inc.**  
**982 Keynote Circle**  
**Brooklyn Heights, OH 44131**

**January 27, 2023**

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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, 2022 through December 31, 2022. 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<sup>1</sup>, 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  $1 \times 10^{-7}$  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  $2.68 \times 10^{-2}$  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

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<sup>1</sup> 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 2022 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 2022 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 2022 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 2022. 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 2 inactive bedrock groundwater wells (GW-7B and GW-11B) in 2022 on a voluntary basis 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 spring 2023. NYSDEC also requested hydraulic monitoring be completed at inactive overburden wells GW-8A and GW-9A; however, these wells were inadvertently omitted in 2022. The wells will be included in the 2023 monitoring event. 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.

##### 1987 - 2005

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, BW-4, and GW-8B), and samples would only be analyzed for VOCs.

#### *Summary of the 2022 Groundwater Sampling Campaign, Reports and Results*

The annual groundwater sampling campaign was conducted by GHD on September 20, 2022. GHD's 2022 Annual Groundwater Monitoring Letter, dated January 12, 2023, 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 September 2022 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 two 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. In the comment letter on the 2021 PRR dated March 17, 2022, NYSDEC requested that the same monitoring wells from 2021 be hydraulically monitored in 2022; however, inactive overburden wells GW-8A and GW-9A were inadvertently omitted. The wells will be included in the 2023 monitoring event. Based on the water level data collected, groundwater was flowing in a general east-southeasterly direction in the overburden and, in general, off the landfill in an easterly direction 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 2022 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 4.1 micrograms per liter ( $\mu\text{g/L}$ ) in September 2022, which was above the criteria of 2  $\mu\text{g/L}$ . Concentrations of VC have either been non-detect or below 10  $\mu\text{g/L}$  since September 2001 and have exhibited minor fluctuations throughout this time period.
- **Cis-1,2-DCE:** Cis-1,2-DCE was non-detect in September 2022, and it has not been detected at concentrations at or above the criteria of 5  $\mu\text{g/L}$  from March 2000 to the present.
- **PCE and TCE:** PCE and TCE were non-detect in September 2022 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 720  $\mu\text{g/L}$  (810  $\mu\text{g/L}$  in the duplicate) in September 2022, which was above the criteria of 5  $\mu\text{g/L}$ . 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 concentrations detected in May 2021 and September 2022 have been lower than these large fluctuations between September 2010 and September 2020. Future monitoring events will aid in determining if the decreased concentrations detected in May 2021 and September 2022 are part of a fluctuation in the overall pattern of gradually increasing concentrations or if concentrations will remain decreased
- **PCE:** PCE was detected at a concentration of 350  $\mu\text{g/L}$  (370  $\mu\text{g/L}$  in the duplicate) in May 2021, which was above the criteria of 5  $\mu\text{g/L}$ . 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 concentrations detected in May 2021 and September 2022 are part of an apparent long-term stable trend, with some fluctuation.
- **TCE:** TCE was detected at a concentration of 440  $\mu\text{g/L}$  (480  $\mu\text{g/L}$  in the duplicate) in September 2022, which was above the criteria of 5  $\mu\text{g/L}$ . 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 concentrations detected in May 2021 and September 2022 are part of this overall decreasing trend.
- **Vinyl Chloride:** VC was detected at a concentration of 120  $\mu\text{g/L}$  (140  $\mu\text{g/L}$  in the duplicate) in September 2022, which was above the criteria of 2  $\mu\text{g/L}$ . 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 concentrations detected in May 2021 and September 2022 are 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 September 2022, 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 4.6 µg/L in September 2022, 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 4.3 µg/L in September 2022, 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 September 2022 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 May 2021 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 September 2022 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 generally stabilized. 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 September 2022 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 and September 2022 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 September 2022. Future monitoring events will aid in determining if the decreased concentrations detected in May 2021 and September 2022 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 2022.

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 2022 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 2022.



## **5. Property Transfer Status**

No property transfer activities were completed in 2022.

## 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 2022 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 35 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 2023, with the addition of hydraulic monitoring of inactive overburden wells MW-8A and MW-9A in accordance with NYSDEC's comment/request from March 17, 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 and September 2022. Future monitoring events will aid in determining if the decreased concentrations detected in May 2021 and September 2022 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 one additional regular sampling event 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 any additional wells (i.e., BW-1, BW-2, and BW-6), 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 – September 2022

Table 2

**Analytical Results Summary**  
**Annual Groundwater Monitoring Program**  
**GrafTech International Holdings, Inc.**  
**Niagara Falls, New York**  
**September 2022**

Location ID:			BW-3	BW-4	BW-4	GW-8B
Sample Name:			WG-11194450-092022-JK-004	WG-11194450-092022-JK-002	WG-11194450-092022-JK-003	WG-11194450-092022-KM-001
Sample Date:			09/20/2022	09/20/2022	09/20/2022 Duplicate	09/20/2022
Parameters	Unit	NYSDEC Class GA Criteria/TOGS				
<b>Volatile Organic Compounds</b>						
1,1,1-Trichloroethane	µg/L	5	1.0 U	2.0 U	20 U	1.0 U
1,1,2,2-Tetrachloroethane	µg/L	5	1.0 U	2.0	20 U	1.0 U
1,1,2-Trichloroethane	µg/L	1	1.0 U	2.0 U	20 U	1.0 U
1,1-Dichloroethane	µg/L	5	1.0 U	2.0 U	20 U	1.0 U
1,1-Dichloroethene	µg/L	5	1.0 U	3.2	20 U	1.0 U
1,2-Dichloroethane	µg/L	0.6	1.0 U	2.0 U	20 U	1.0 U
1,2-Dichloroethene (total)	µg/L	5	2.0 U	720	810	20
1,2-Dichloropropane	µg/L	1	1.0 U	2.0 U	20 U	1.0 U
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	50	10 U	20 U	200 U	10 U
2-Hexanone	µg/L	50	5.0 U	10 U	100 U	5.0 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	--	5.0 U	10 U	100 U	5.0 U
Acetone	µg/L	50	10 U	20 U	200 U	10 U
Benzene	µg/L	1	1.0 U	2.0 U	20 U	1.0 U
Bromodichloromethane	µg/L	50	1.0 U	2.0 U	20 U	1.0 U
Bromoform	µg/L	5	1.0 U	2.0 U	20 U	1.0 U
Bromomethane (Methyl bromide)	µg/L	5	1.0 U	2.0 U	20 U	1.0 U
Carbon disulfide	µg/L	60	1.0 U	2.0 U	20 U	1.0 U
Carbon tetrachloride	µg/L	5	1.0 U	2.0 U	20 U	1.0 U
Chlorobenzene	µg/L	5	1.0 U	2.0 U	20 U	1.0 U
Chloroethane	µg/L	5	1.0 U	2.0 U	20 U	1.0 U
Chloroform (Trichloromethane)	µg/L	7	1.0 U	5.1	6.8 J	1.0 U
Chloromethane (Methyl chloride)	µg/L	5	1.0 U	2.0 U	20 U	0.48 J
cis-1,2-Dichloroethene	µg/L	5	1.0 U	720	810	20
cis-1,3-Dichloropropene	µg/L	0.4	1.0 U	2.0 U	20 U	1.0 U
Dibromochloromethane	µg/L	50	1.0 U	2.0 U	20 U	1.0 U
Ethylbenzene	µg/L	5	1.0 U	2.0 U	20 U	1.0 U
Methylene chloride	µg/L	5	1.0 U	2.0 U	20 U	1.0 U
Styrene	µg/L	5	1.0 U	2.0 U	20 U	1.0 U
Tetrachloroethene	µg/L	5	1.0 U	350	370	1.0 U
Toluene	µg/L	5	1.0 U	2.0 U	20 U	1.0 U
trans-1,2-Dichloroethene	µg/L	5	1.0 U	10 U	20 U	1.0 U
trans-1,3-Dichloropropene	µg/L	0.4	1.0 U	2.0 U	20 U	1.0 U
Trichloroethene	µg/L	5	1.0 U	440	480	4.3
Vinyl chloride	µg/L	2	4.1	120	140	4.6
Xylenes (total)	µg/L	5	2.0 U	4.0 U	40 U	2.0 U

## Notes:

U - Not detected at the associated reporting limit

J - Estimated concentration

TOGS - Technical and Operational Guidance Series

- Boxed values are greater than regulatory limit

### 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 - September 2022

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)
BW-3	Cis-1,2-DCE	5	10U	5U	5U	5U	5U	5U	5U	5U	5U	1.8
	PCE	5	10U	5U	5U	5U	5U	5U	5U	5U	5U	5U
	TCE	5	10U	5U	5U	5U	5U	5U	5U	5U	5U	5U
	Vinyl Chloride	2	15	5U	5U	5U	5U	5U	5U	6.1	5U	5.7
GW-8B	Cis-1,2-DCE	5	14	23 (22)	26	27	22	5U	21	20	22	23
	PCE	5	10U	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
	Vinyl Chloride	2	10U	5U (5U)	5U	5U	5U	5U	5U	5U	5U	4.6J
BW-4	Cis-1,2-DCE	5	180	270	420	300	230 (240)	500	660	370 (390)	540 (530)	620 (620)
	PCE	5	135	240	64	230	29 (30)	100	110	55 (56)	64 (65)	84 (86)
	TCE	5	178	410	230	420	170 (170)	330	230	290 (290)	180 (180)	290 (290)
	Vinyl Chloride	2	115	74	92	59	41 (41)	100	180	75 (79)	180 (180)	140 (140)

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 (cont.)

Summary of Bedrock Well Analytical Results: PCE, TCE, cis-1,2-DCE, and Vinyl Chloride  
March 2000 - September 2022

Well Number	Parameter	Groundwater Criteria (ppb)	March 2007 (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)
BW-3	Cis-1,2-DCE	5	5U	2.2	10U*	2.2J*	0.95J**	2	1.7	0.45	2.8	0.85
	PCE	5	5U	5U	5U	5U	0.42U	1.0U	1.0U	1.0U	1.0U	1.0U
	TCE	5	5U	5U	5U	5U	0.30U	1.0U	1.0U	1.0U	1.0U	1.0U
	Vinyl Chloride	2	5.0U	8.2	5.0U	6.4	0.3U	5.7	6.0	4.1	3.2	3.1
GW-8B	Cis-1,2-DCE	5	20	23	20*	20*	19**	23	20	22	17	24
	PCE	5	5U	5U	5U	5U	0.42U	1.0U	1.0U	1.0U	1.0U	1.0U
	TCE	5	9.8	5.7	7.4	8.8	8.2	7.6	7.2	12	12	9.7
	Vinyl Chloride	2	5.0U	4.7J	3.5J	3.5J	2.9J	3.5	3.8	2.7	1.6	3.1
BW-4	Cis-1,2-DCE	5	710 (640)	580 (540)	720*	740*	1000**	1700	1300	2200 (1700)	1300	930J
	PCE	5	120 (110)	86 (79)	140J	97	92	120	92	390 (330)	300	240
	TCE	5	310 (280)	320 (300)	220J	300	390	640	510	1300 (980)	790	660J
	Vinyl Chloride	2	170 (150)	100 (100)	160J	170	190	290	240	350 (270)	270	180

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 (cont.)

Summary of Bedrock Well Analytical Results: PCE, TCE, cis-1,2-DCE, and Vinyl Chloride  
March 2000 - September 2022

Well Number	Parameter	Groundwater Criteria (ppb)	May 2017 (ppb)	Sept. 2018 (ppb)	May 2019 (ppb)	September 2020 (ppb)	May 2021 (ppb)	September 2022 (ppb)
BW-3	Cis-1,2-DCE	5	0.99	1.0U	1.2	1.0U	2.5	1.0U
	PCE	5	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
	TCE	5	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
	Vinyl Chloride	2	1.0U	2.5	5.1	4.9	9.1	4.1
GW-8B	Cis-1,2-DCE	5	14 (14)	21.0	18	22	20	20
	PCE	5	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
	TCE	5	9.2 (9.2)	4.7	8.0	3.6	3.6	4.3
	Vinyl Chloride	2	1.7	3.5	2.1	6.0	3.2	4.6
BW-4	Cis-1,2-DCE	5	950	1000 (940)	1000 (1000)	2300 (1900)	570 (480)	720 (810)
	PCE	5	250	390 (410)	390 (400)	1600 (1200)	200 (190)	350 (370)
	TCE	5	600	650 (640)	510 (540)	1200 (930)	300 (260)	440 (480)
	Vinyl Chloride	2	240	150 (180)	230 (270)	480 (410)	89 (72)	120 (140)

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

Parentheses indicate the results of the duplicate sample

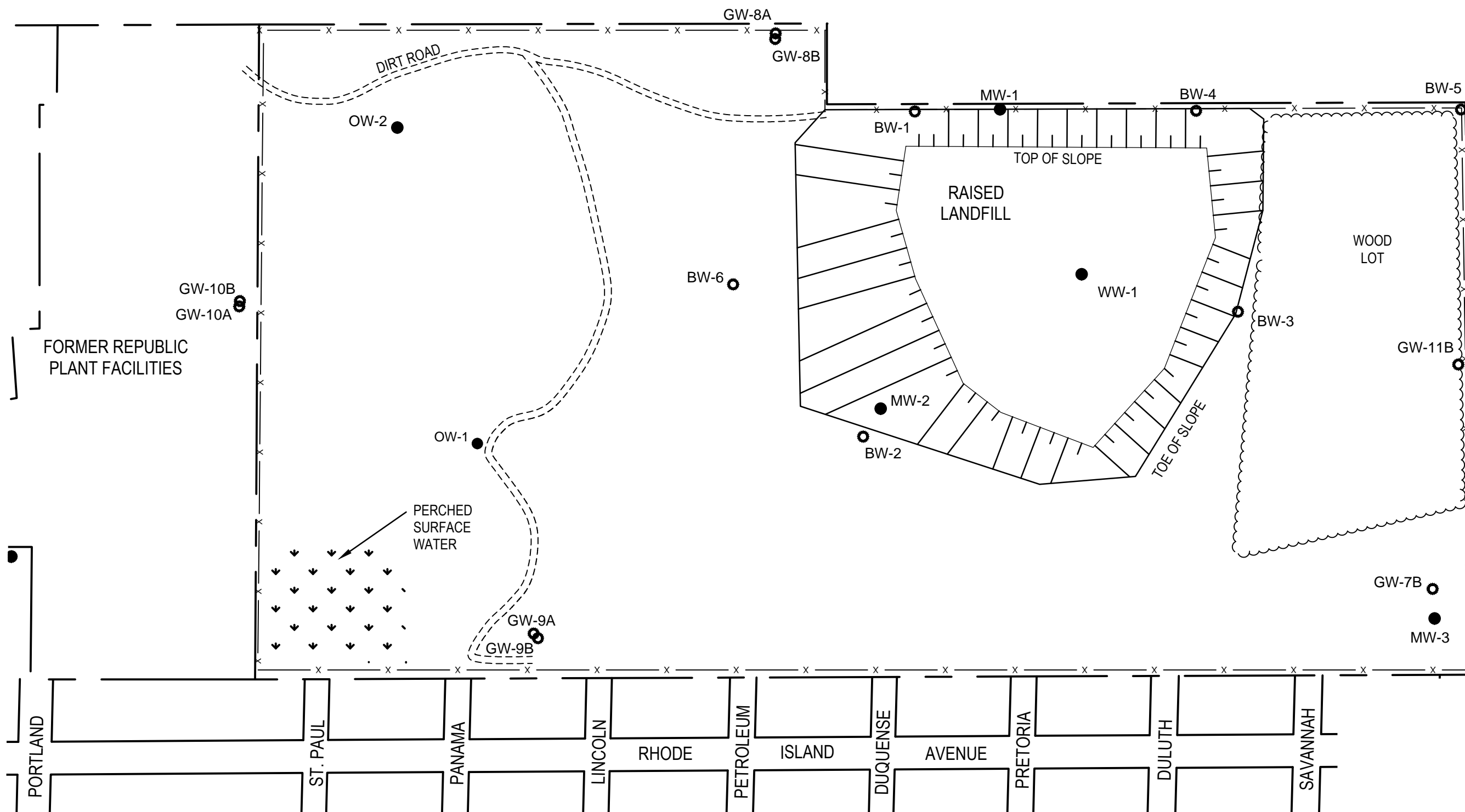
\* - Concentration represents total 1,2-DCE

\*\* - Concentration represents total DCE

J - Concentration is an estimated value

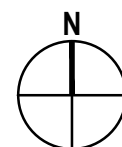
U - Not present at or above the associated value

## Figures



# **LEGEND**

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



FORMER REPUBLIC LANDFILL  
NIAGARA FALLS, NEW YORK

**SITE PLAN**  
(JANUARY 11, 2022)

Project No. 11194450  
Date January 22

**FIGURE 1.0**

Figure 2  
Historical Data Graph  
Well BW-3

Former Republic Landfill

## BW-3

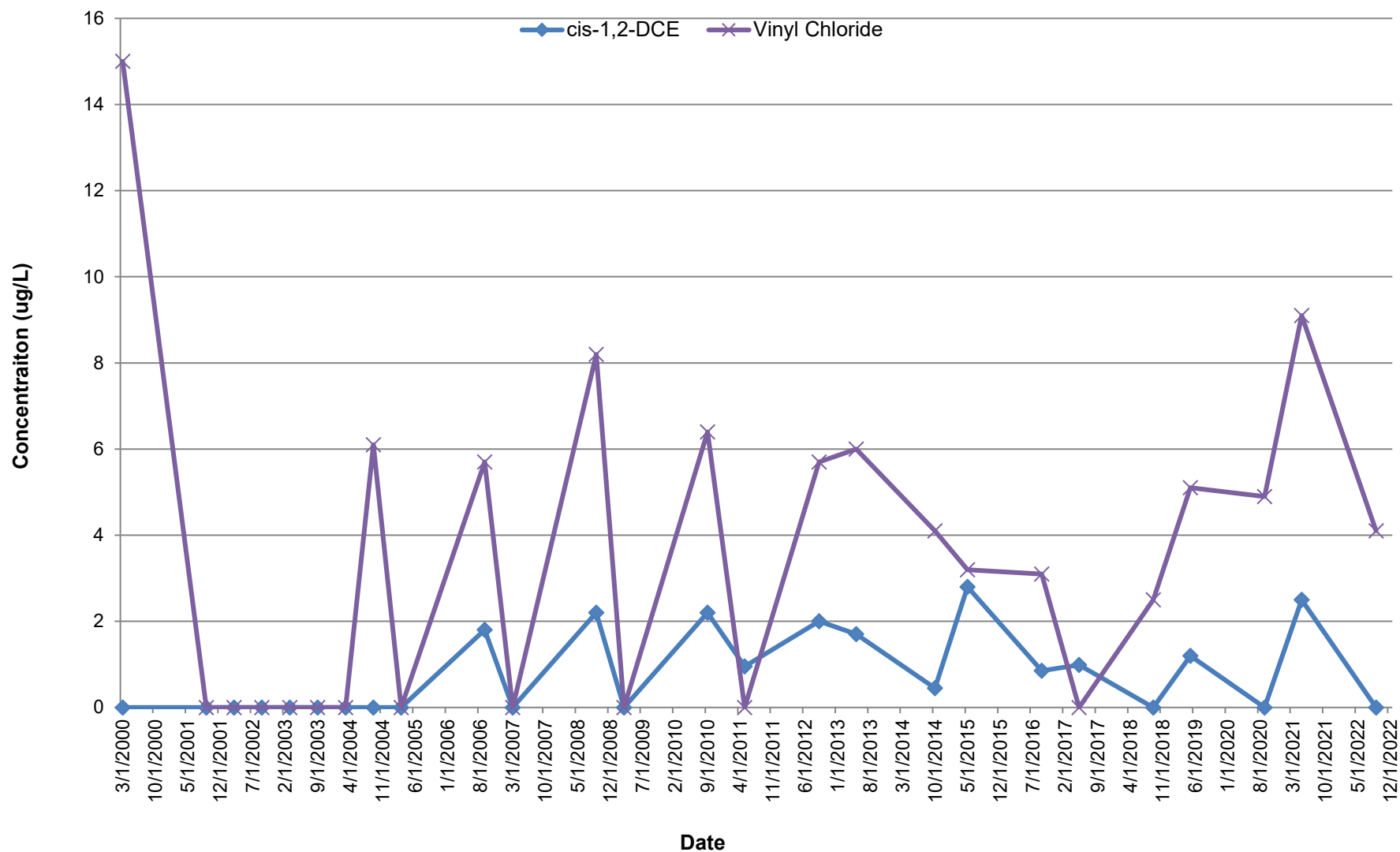


Figure 3  
Historical Data Graph  
Well BW-4

Former Republic Landfill

## BW-4

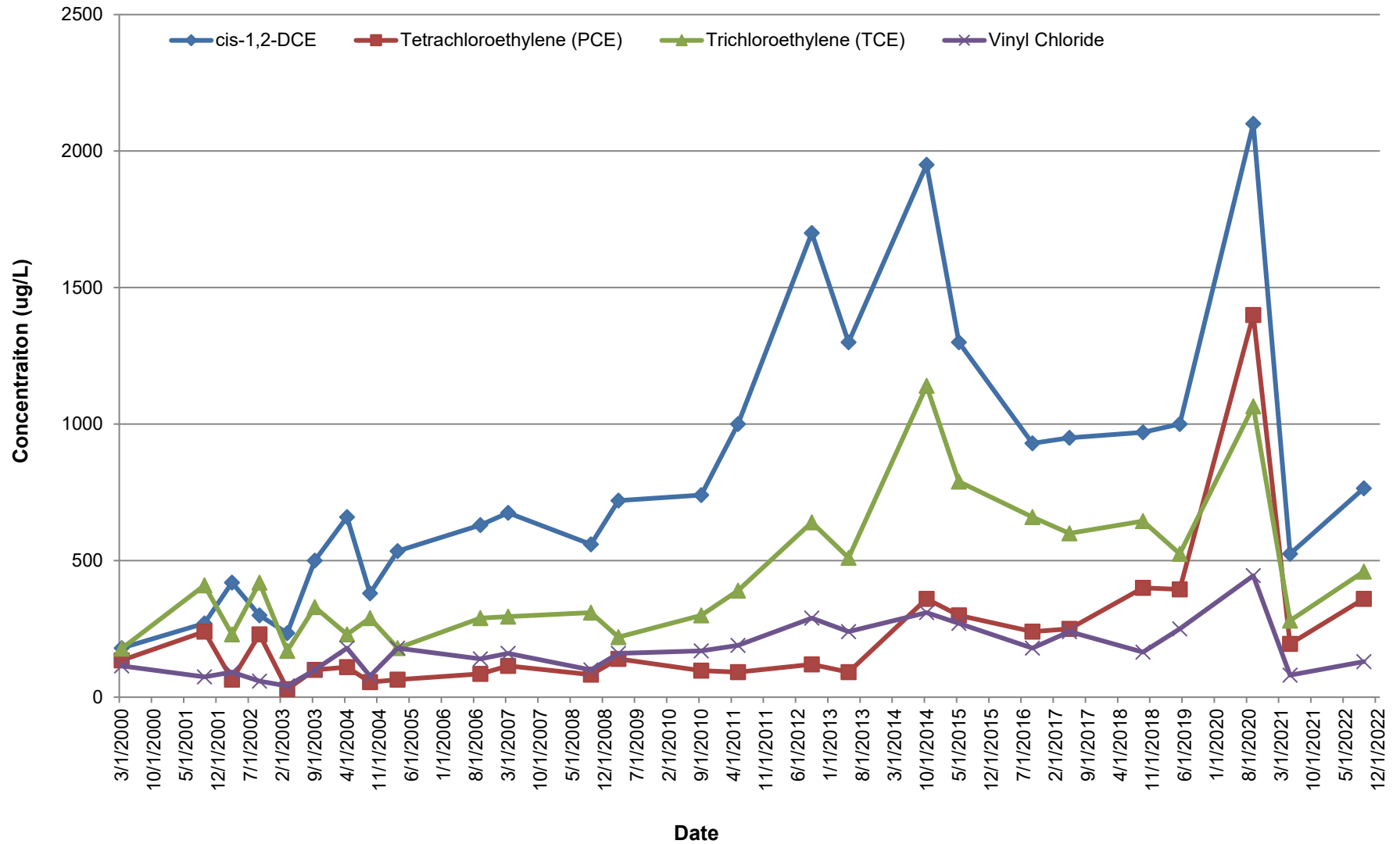
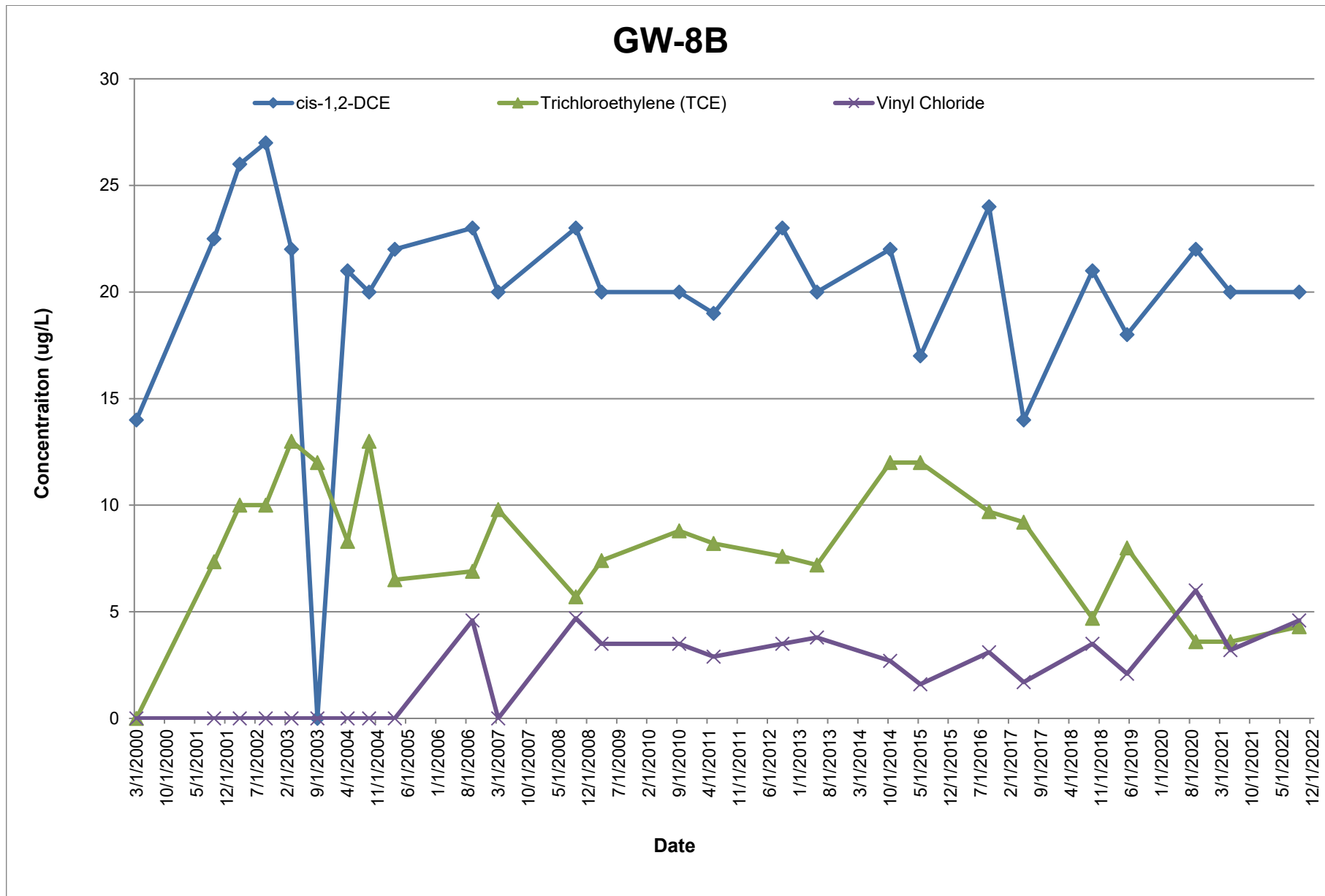


Figure 4  
Historical Data Graph  
Well GW-8B

Former Republic Landfill





## Appendix A

Weekly General Landfill and Site Security Inspection Report Form

Quarterly Groundwater Well Inspection Report Form

**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				

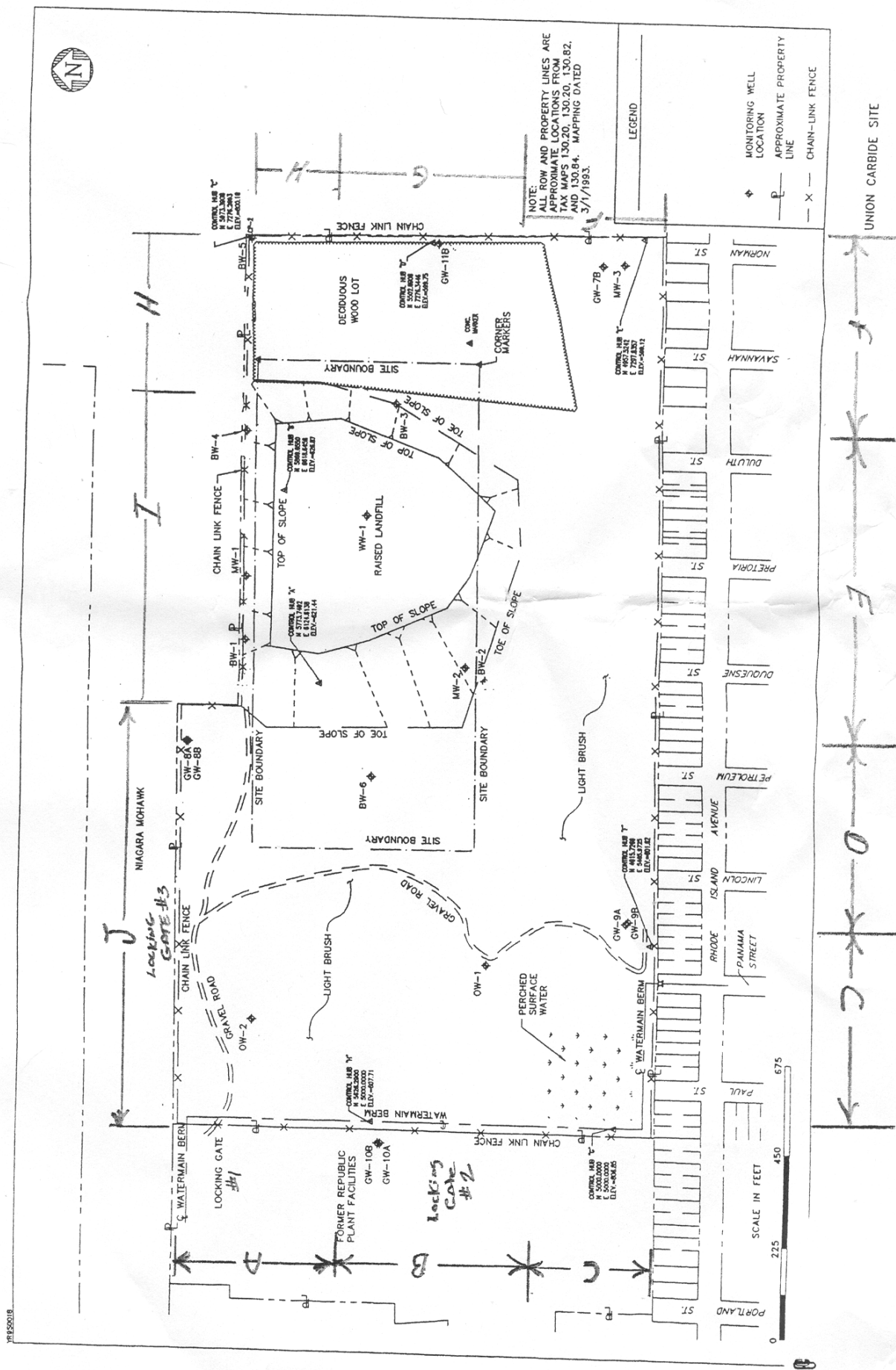
**SECURITY-RELATED ENGINEERED CONTROLS COMMENTS:** (Check for condition, damage, signs of security breach)

**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.**



**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:**

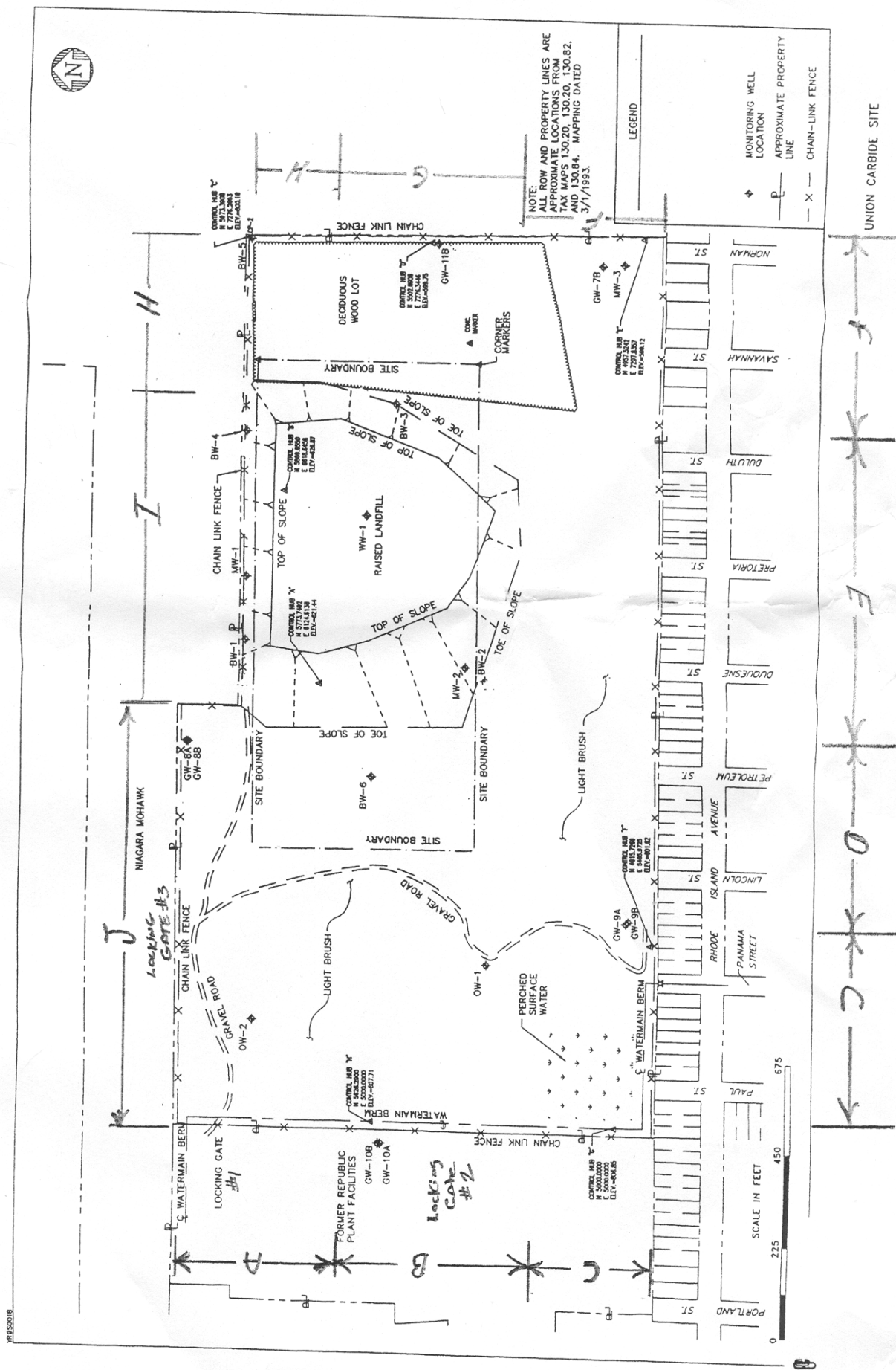
MW wells are installed in the overburden.

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.



## Appendix B

Letter from NYSDEC, DER - Region 9, to GrafTech, dated April 26, 2022  
(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](http://www.dec.ny.gov)

April 26, 2022

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  
2021 Periodic Review Report**

Dear Julianne Snyder (as the Certifying Party):

The Department has reviewed your Periodic Review Report (PRR) and IC/EC Certification for following period: December 31, 2020 to December 31, 2021.

The Department hereby accepts the PRR and associated Certification. The frequency of Periodic Reviews for this site is 1 year(s), your next PRR is due on January 30, 2023. You will receive a reminder letter and updated certification form 75-days prior to the due date. Regardless of receipt or not, of the reminder notice, the next PRR including the signed certification form, is still due on the date specified above.

If you have any questions, or need additional forms, please contact me at 716-851-7220 or e-mail: [andrew.zwack@dec.ny.gov](mailto:andrew.zwack@dec.ny.gov).

Sincerely,

Andrew Zwack  
Project Manager  
Assistant Engineer

ec: Benjamin McPherson – NYSDEC  
Charlotte Bethoney - NYSDOH  
Sally Rushford - NYSDOH



Department of  
Environmental  
Conservation

## 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  
Project Manager

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 -0400

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



Department of  
Environmental  
Conservation

## Appendix D

GHD Letter to GrafTech, Reference No. 11194450,  
2022 Annual Groundwater Monitoring Results Summary Letter



285 Delaware Avenue  
Buffalo, New York 14202  
United States  
www.ghd.com

Our ref: 11194450

January 12, 2023

Ms. Julianne Snyder  
GrafTech International Holdings, Inc.  
982 Keynote Circle  
Brooklyn Heights, OH 44131

**2022 Annual Groundwater Monitoring Results Summary Letter  
Former Republic Landfill, Niagara Falls, New York**

Dear Ms. Snyder:

GHD is presenting this 2022 Annual Groundwater Monitoring Results Summary Letter documenting the results of the annual groundwater monitoring event completed on September 20, 2022 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 2.1 Water Levels and Groundwater Elevations – September 20, 2022**

Well ID	Well Type	Reference Point Elevation (ft. AMSL)	Depth to Water (ft. BTOR <sub>i</sub> )	Groundwater Elevation (ft. AMSL)
MW-1	Overburden	611.13 (TOC)	12.92	598.21
MW-2	Overburden	611.62 (TOR)	13.69	597.93
MW-3	Overburden	601.80 (TOR)	11.21	590.59
BW-1	Bedrock	611.66 (TOC)	16.94	594.72
BW-2	Bedrock	608.40 (TOC)	14.45	593.95
BW-3	Bedrock	605.02 (TOC)	13.55	591.47
BW-4	Bedrock	607.13 (TOC)	13.32	593.81
BW-5	Bedrock	603.27 (TOC)	11.54	591.73
BW-6	Bedrock	611.11 (TOC)	13.03	598.08
GW-7B	Bedrock	603.81 (TOC)	12.79	591.02
GW-8B	Bedrock	603.30 (TOR)	10.45	592.85
GW-9B	Bedrock	602.74 (TOR)	13.78	588.96
GW-11B	Bedrock	601.40 (TOR)	10.11	591.29

**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 2.2      Sounded Well Depths – September 20, 2022**

Well ID	Well Type	Sounded Depth (ft. BTOR <sub>i</sub> )	Sounded Depth after April 2019 Redevelopment (ft. BTOR <sub>i</sub> )	Installed Depth (ft. BTOR <sub>i</sub> )
MW-1	Overburden	23.35	NA	20.88
MW-2	Overburden	24.38	NA	24.68
MW-3	Overburden	15.30	NA	15.93
BW-1	Bedrock	28.96	29.00	37.11
BW-2	Bedrock	27.77	27.63	38.03
BW-3	Bedrock	24.98	25.00	25.42
BW-4	Bedrock	27.07	27.10	27.80
BW-5	Bedrock	28.63	28.75	28.57
BW-6	Bedrock	25.59	30.40	36.42
GW-7B	Bedrock	33.87	NA	33.71
GW-8B	Bedrock	29.18	NA	29.42
GW-9B	Bedrock	32.04	NA	31.69
GW-11B	Bedrock	28.19	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, off the landfill in an easterly direction in the bedrock during the monitoring event. A groundwater mound was observed west of the landfill around BW-6 with groundwater moving radially to the north, south, and east. 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 September 2022 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 4.1 micrograms per liter (µg/L) in September 2022, 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 non-detect in September 2022 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 September 2022 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 720 µg/L (810 µg/L in the duplicate) in September 2022, 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 May 2021. The concentration detected in September 2022 was slightly above the May 2021 concentration, but still lower than other observed concentrations since September 2010. 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 350 µg/L (370 µg/L in the duplicate) in September 2022, 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 September 2022 is part of an apparent long-term stable trend, with some fluctuation.

- TCE was detected at a concentration of 440 µg/L (480 µg/L in the duplicate) in September 2022, 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 September 2022 is part of this overall decreasing trend.
- VC was detected at a concentration of 120 µg/L (140 µg/L in the duplicate) in September 2022, 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 September 2022 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 September 2022, 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 4.6 µg/L in September 2022, 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 4.3 µg/L in September 2022, 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 September 2022 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 May 2021 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 September 2022 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 generally stabilized. Concentrations of VOCs detected in bedrock well BW-4 have increased slightly since the May 2021 sampling event, but still remain lower than the highs observed in 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 2022 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 generally upgradient or cross-gradient of the landfill, were generally lower in 2022 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 May 2023.

GHD appreciates the opportunity to conduct this work. If you have any questions regarding this or require additional assistance, please contact the undersigned at 716-362-8839 or [katherine.galanti@ghd.com](mailto:katherine.galanti@ghd.com).

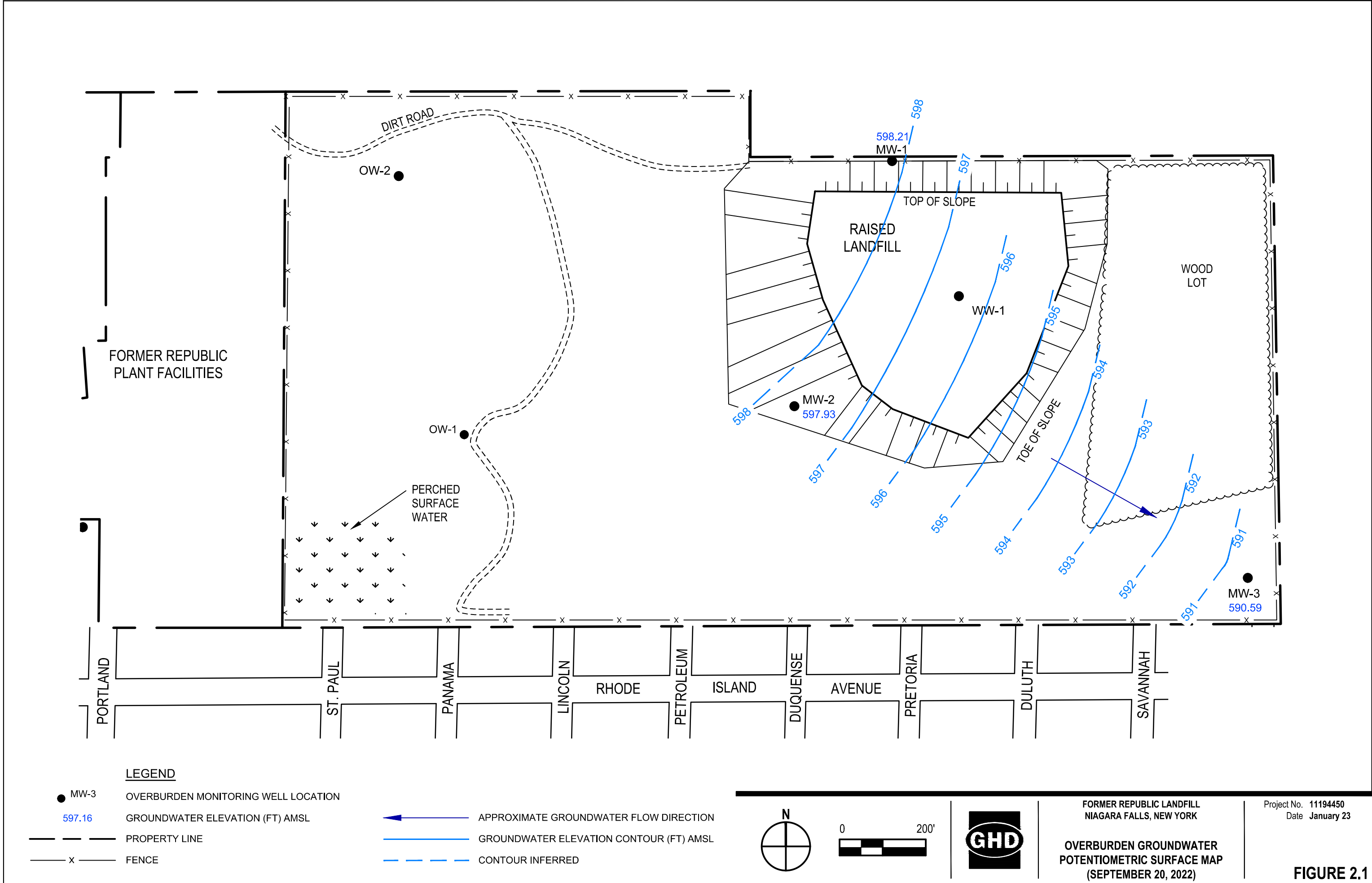
Regards,



**Katherine Galanti**  
Scientist

+1 716 362-8839  
[katherine.galanti@ghd.com](mailto:katherine.galanti@ghd.com)





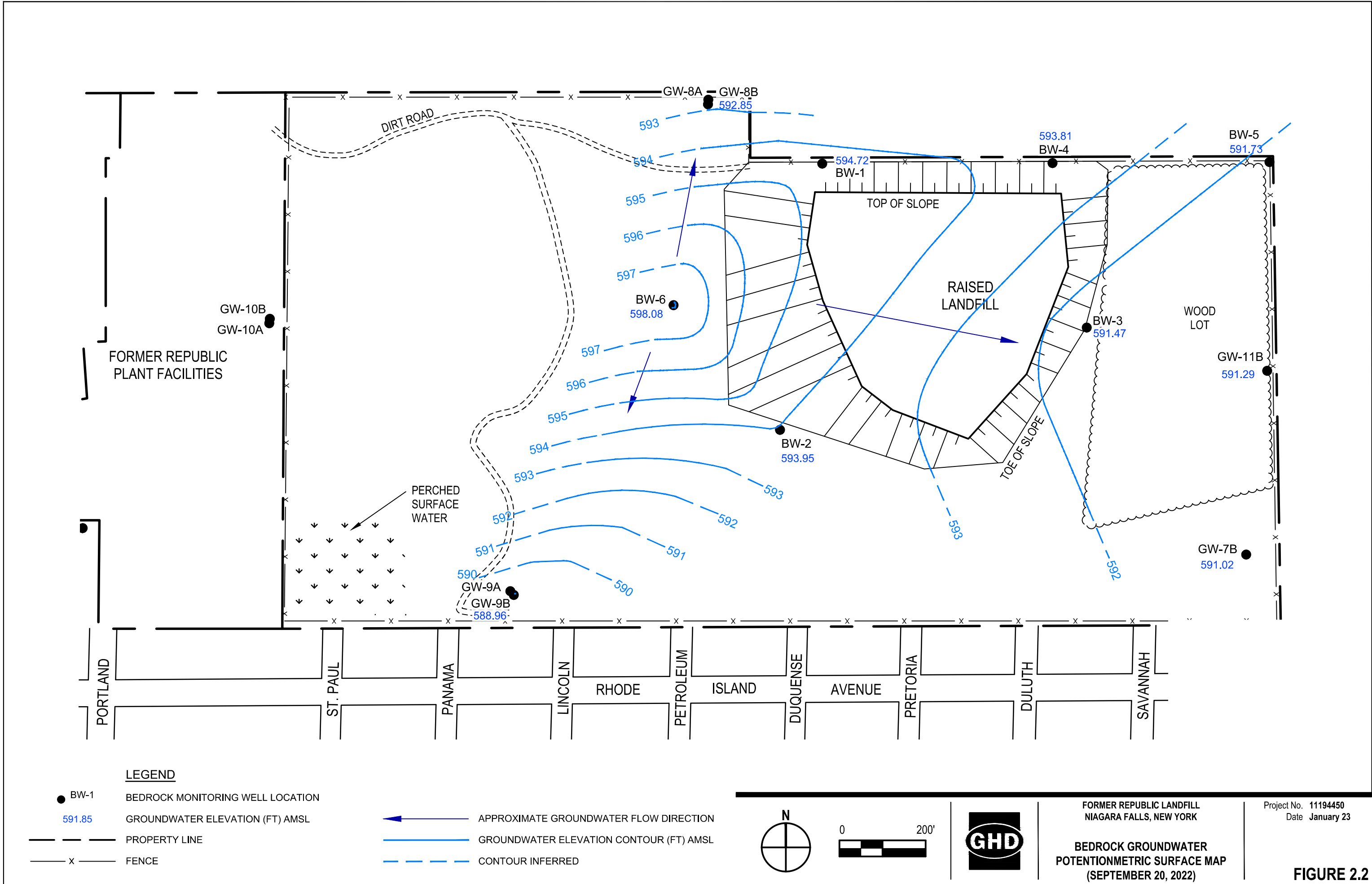


Figure 3.1  
Historical Data Graph  
Well BW-3

Former Republic Landfill

## BW-3

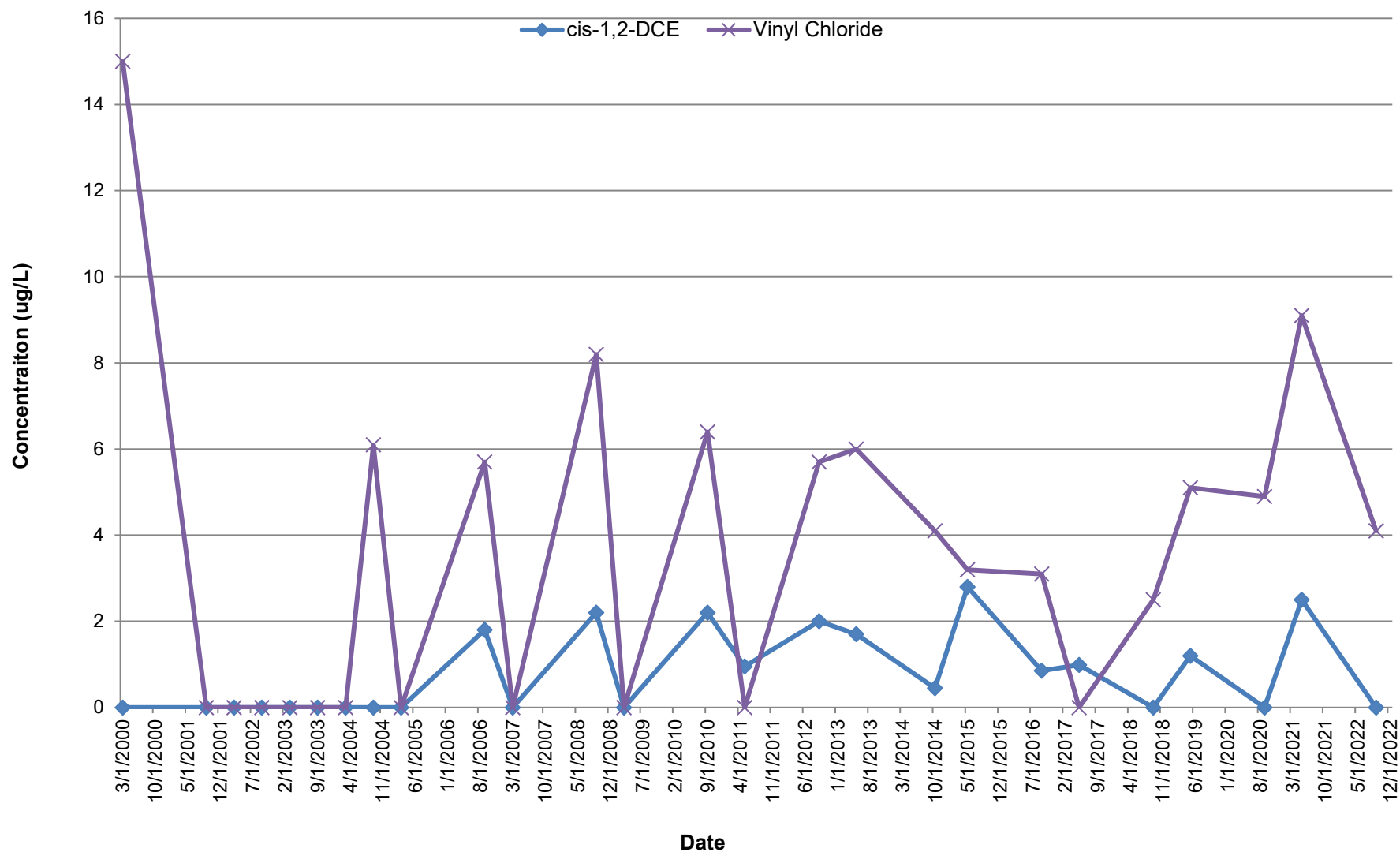


Figure 3.2  
Historical Data Graph  
Well BW-4

Former Republic Landfill

## BW-4

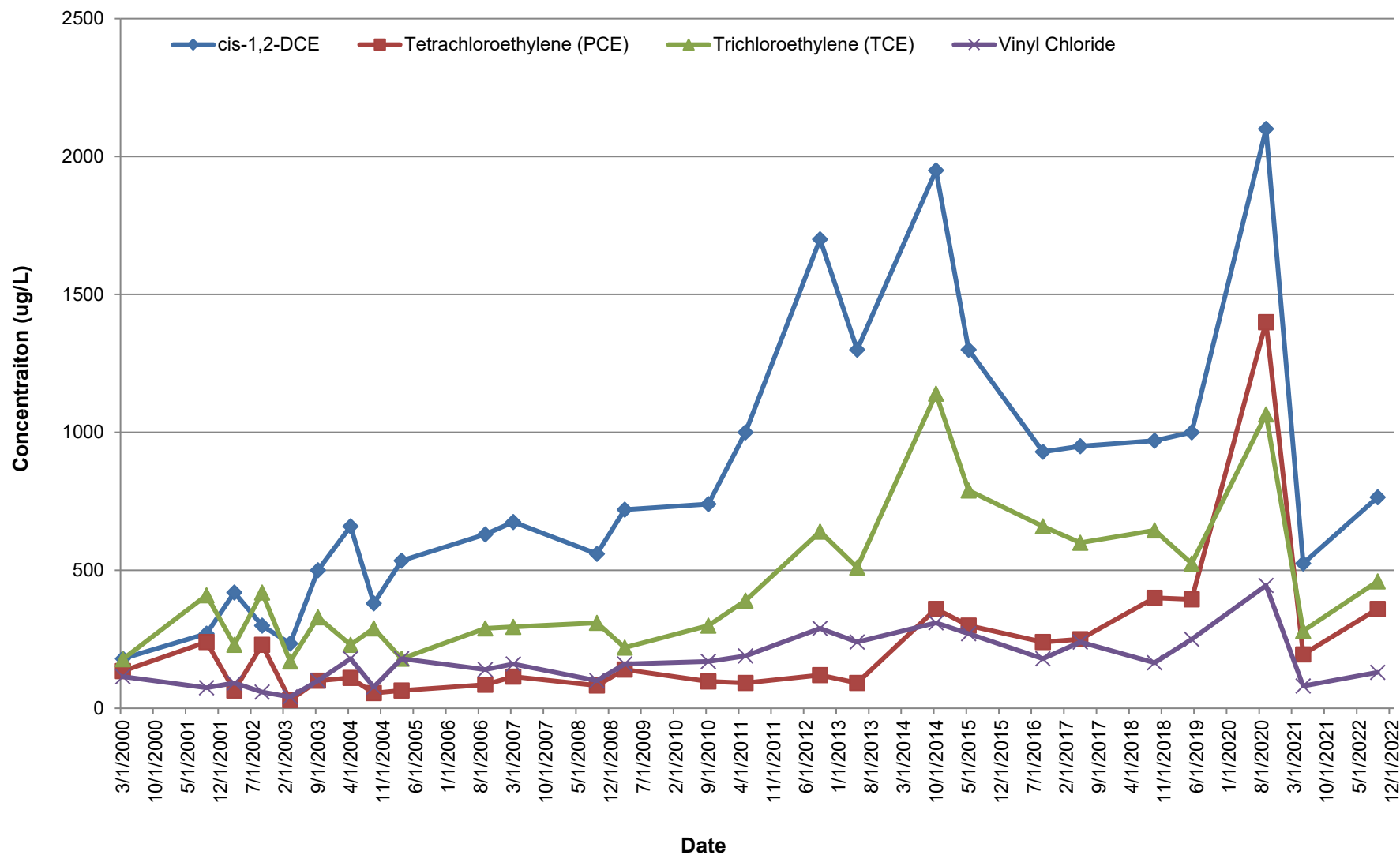


Figure 3.3  
Historical Data Graph  
Well GW-8B

Former Republic Landfill

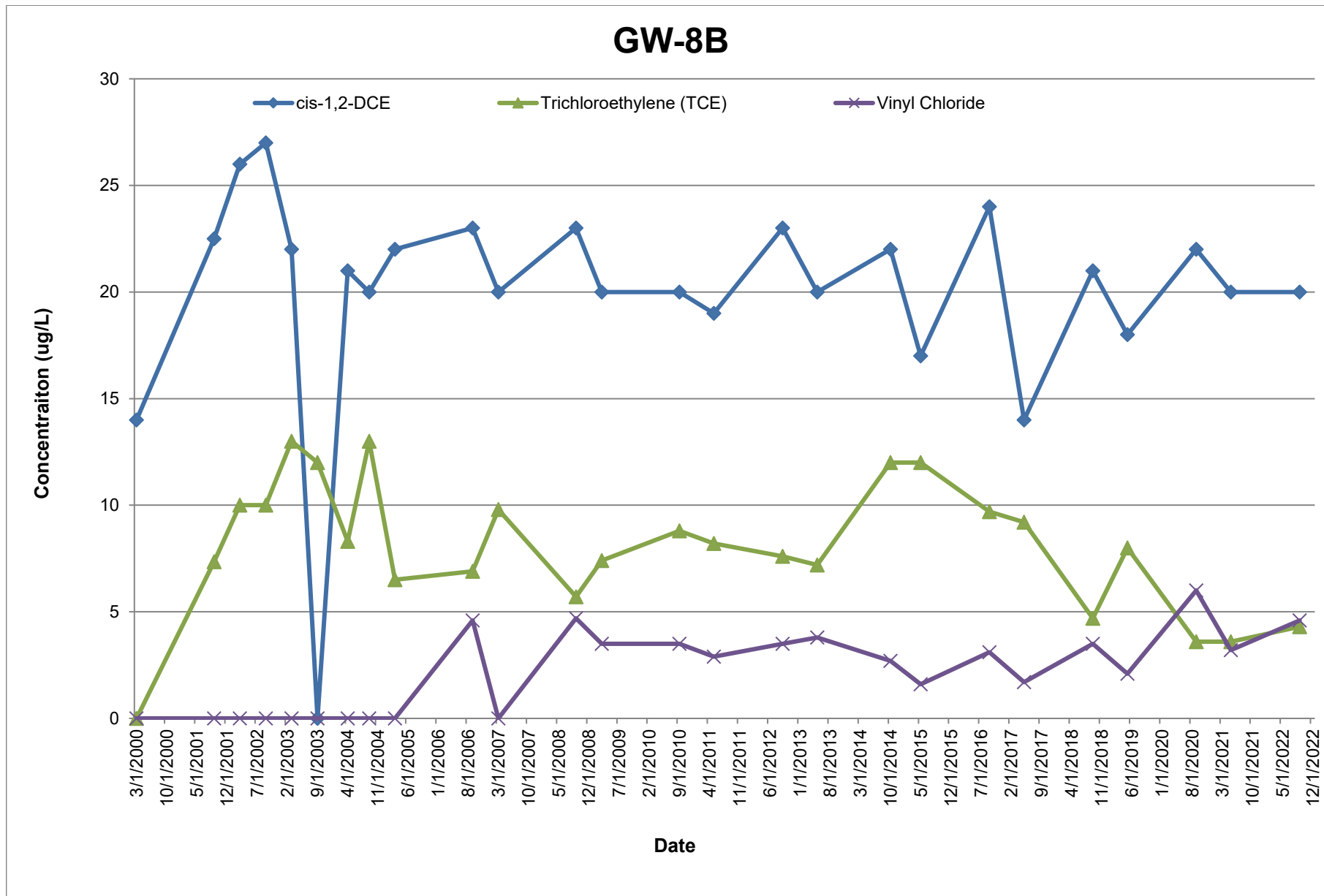


Table 3.1

**Analytical Results Summary**  
**Annual Groundwater Monitoring Program**  
**GrafTech International Holdings, Inc.**  
**Niagara Falls, New York**  
**September 2022**

Location ID:			BW-3	BW-4	BW-4	GW-8B
Sample Name:			WG-11194450-092022-JK-004	WG-11194450-092022-JK-002	WG-11194450-092022-JK-003	WG-11194450-092022-KM-001
Sample Date:			09/20/2022	09/20/2022	09/20/2022 Duplicate	09/20/2022
Parameters	Unit	NYSDEC Class GA Criteria/TOGS				
<b>Volatile Organic Compounds</b>						
1,1,1-Trichloroethane	µg/L	5	1.0 U	2.0 U	20 U	1.0 U
1,1,2,2-Tetrachloroethane	µg/L	5	1.0 U	2.0	20 U	1.0 U
1,1,2-Trichloroethane	µg/L	1	1.0 U	2.0 U	20 U	1.0 U
1,1-Dichloroethane	µg/L	5	1.0 U	2.0 U	20 U	1.0 U
1,1-Dichloroethene	µg/L	5	1.0 U	3.2	20 U	1.0 U
1,2-Dichloroethane	µg/L	0.6	1.0 U	2.0 U	20 U	1.0 U
1,2-Dichloroethene (total)	µg/L	5	2.0 U	720	810	20
1,2-Dichloropropane	µg/L	1	1.0 U	2.0 U	20 U	1.0 U
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	50	10 U	20 U	200 U	10 U
2-Hexanone	µg/L	50	5.0 U	10 U	100 U	5.0 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	--	5.0 U	10 U	100 U	5.0 U
Acetone	µg/L	50	10 U	20 U	200 U	10 U
Benzene	µg/L	1	1.0 U	2.0 U	20 U	1.0 U
Bromodichloromethane	µg/L	50	1.0 U	2.0 U	20 U	1.0 U
Bromoform	µg/L	5	1.0 U	2.0 U	20 U	1.0 U
Bromomethane (Methyl bromide)	µg/L	5	1.0 U	2.0 U	20 U	1.0 U
Carbon disulfide	µg/L	60	1.0 U	2.0 U	20 U	1.0 U
Carbon tetrachloride	µg/L	5	1.0 U	2.0 U	20 U	1.0 U
Chlorobenzene	µg/L	5	1.0 U	2.0 U	20 U	1.0 U
Chloroethane	µg/L	5	1.0 U	2.0 U	20 U	1.0 U
Chloroform (Trichloromethane)	µg/L	7	1.0 U	5.1	6.8 J	1.0 U
Chloromethane (Methyl chloride)	µg/L	5	1.0 U	2.0 U	20 U	0.48 J
cis-1,2-Dichloroethene	µg/L	5	1.0 U	720	810	20
cis-1,3-Dichloropropene	µg/L	0.4	1.0 U	2.0 U	20 U	1.0 U
Dibromochloromethane	µg/L	50	1.0 U	2.0 U	20 U	1.0 U
Ethylbenzene	µg/L	5	1.0 U	2.0 U	20 U	1.0 U
Methylene chloride	µg/L	5	1.0 U	2.0 U	20 U	1.0 U
Styrene	µg/L	5	1.0 U	2.0 U	20 U	1.0 U
Tetrachloroethene	µg/L	5	1.0 U	350	370	1.0 U
Toluene	µg/L	5	1.0 U	2.0 U	20 U	1.0 U
trans-1,2-Dichloroethene	µg/L	5	1.0 U	10 U	20 U	1.0 U
trans-1,3-Dichloropropene	µg/L	0.4	1.0 U	2.0 U	20 U	1.0 U
Trichloroethene	µg/L	5	1.0 U	440	480	4.3
Vinyl chloride	µg/L	2	4.1	120	140	4.6
Xylenes (total)	µg/L	5	2.0 U	4.0 U	40 U	2.0 U

## Notes:

U - Not detected at the associated reporting limit

J - Estimated concentration

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 - September 2022

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)
BW-3	Cis-1,2-DCE	5	10U	5U	5U	5U	5U	5U	5U	5U	5U	1.8
	PCE	5	10U	5U	5U	5U	5U	5U	5U	5U	5U	5U
	TCE	5	10U	5U	5U	5U	5U	5U	5U	5U	5U	5U
	Vinyl Chloride	2	15	5U	5U	5U	5U	5U	5U	6.1	5U	5.7
GW-8B	Cis-1,2-DCE	5	14	23 (22)	26	27	22	5U	21	20	22	23
	PCE	5	10U	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
	Vinyl Chloride	2	10U	5U (5U)	5U	5U	5U	5U	5U	5U	5U	4.6J
BW-4	Cis-1,2-DCE	5	180	270	420	300	230 (240)	500	660	370 (390)	540 (530)	620 (620)
	PCE	5	135	240	64	230	29 (30)	100	110	55 (56)	64 (65)	84 (86)
	TCE	5	178	410	230	420	170 (170)	330	230	290 (290)	180 (180)	290 (290)
	Vinyl Chloride	2	115	74	92	59	41 (41)	100	180	75 (79)	180 (180)	140 (140)

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 - September 2022

Well Number	Parameter	Groundwater Criteria (ppb)	March 2007 (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)
BW-3	Cis-1,2-DCE	5	5U	2.2	10U*	2.2J*	0.95J**	2	1.7	0.45	2.8	0.85
	PCE	5	5U	5U	5U	5U	0.42U	1.0U	1.0U	1.0U	1.0U	1.0U
	TCE	5	5U	5U	5U	5U	0.30U	1.0U	1.0U	1.0U	1.0U	1.0U
	Vinyl Chloride	2	5.0U	8.2	5.0U	6.4	0.3U	5.7	6.0	4.1	3.2	3.1
GW-8B	Cis-1,2-DCE	5	20	23	20*	20*	19**	23	20	22	17	24
	PCE	5	5U	5U	5U	5U	0.42U	1.0U	1.0U	1.0U	1.0U	1.0U
	TCE	5	9.8	5.7	7.4	8.8	8.2	7.6	7.2	12	12	9.7
	Vinyl Chloride	2	5.0U	4.7J	3.5J	3.5J	2.9J	3.5	3.8	2.7	1.6	3.1
BW-4	Cis-1,2-DCE	5	710 (640)	580 (540)	720*	740*	1000**	1700	1300	2200 (1700)	1300	930J
	PCE	5	120 (110)	86 (79)	140J	97	92	120	92	390 (330)	300	240
	TCE	5	310 (280)	320 (300)	220J	300	390	640	510	1300 (980)	790	660J
	Vinyl Chloride	2	170 (150)	100 (100)	160J	170	190	290	240	350 (270)	270	180

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

Parenteses 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 - September 2022

Well Number	Parameter	Groundwater Criteria (ppb)	May 2017 (ppb)	Sept. 2018 (ppb)	May 2019 (ppb)	September 2020 (ppb)	May 2021 (ppb)	September 2022 (ppb)
BW-3	Cis-1,2-DCE	5	0.99	1.0U	1.2	1.0U	2.5	1.0U
	PCE	5	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
	TCE	5	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
	Vinyl Chloride	2	1.0U	2.5	5.1	4.9	9.1	4.1
GW-8B	Cis-1,2-DCE	5	14 (14)	21.0	18	22	20	20
	PCE	5	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
	TCE	5	9.2 (9.2)	4.7	8.0	3.6	3.6	4.3
	Vinyl Chloride	2	1.7	3.5	2.1	6.0	3.2	4.6
BW-4	Cis-1,2-DCE	5	950	1000 (940)	1000 (1000)	2300 (1900)	570 (480)	720 (810)
	PCE	5	250	390 (410)	390 (400)	1600 (1200)	200 (190)	350 (370)
	TCE	5	600	650 (640)	510 (540)	1200 (930)	300 (260)	440 (480)
	Vinyl Chloride	2	240	150 (180)	230 (270)	480 (410)	89 (72)	120 (140)

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

# **Attachment A**

## **Field Notes**

Graftech Annual  
Water Level Round  
September 2022

Project #: 11194450-09  
Field File

Date 9/24/22  
Project# 11194480-01  
W/L Mkr GSH08844

Hydrant Monitoring  
Crew: DSI KM JK

Well #	Time	W/L	DTB	Measure Pt.
MW-1	1055	12.92	23.35	TOC
MW-2	1004	13.61	24.78	TOR
MW-3	0947	11.21	15.30	TOR
BW-1	0909	16.94	28.96	TOC
BW-2	1008	14.45	27.77	TGC
BW-3	0923	13.55	24.98	TGC
BW-4	0917	13.32	27.07	TGC
BW-5	0931	11.54	28.63	TGC
BW-6	0959	13.03	25.59	TGC
GW-8B	0852	10.45	29.18	TOR
GW-9B	0954	13.78	32.04	TOR
GW-7B	1116	12.79	33.87	TGC
GW-11B	1112	10.11	28.19	TOR

David J. Taylor

Graftech Annual

GW Sampling

September 2022

Project # 11194450-09

Field File

Field Data Record Form  
Water Level Meter

Page 1 of 1

Control number: 08844  
Date (mm/dd/yyyy): 09/20/2022  
User (print name): K. Miller J. Kavecki

Project number: 11194450-09  
Project name: Grafton GW Sampling  
Location: Niagara Falls NY

Additional equipment control numbers and descriptions:

Field procedure before use:

	Check when completed
• Check for broken or missing parts.	
• Check battery	<input checked="" type="checkbox"/>
• Check operation of buzzer.	<input checked="" type="checkbox"/>
• Check operation of signal light.	<input checked="" type="checkbox"/>
• Test probe in water to ensure unit operates, both visually and audibly.	<input checked="" type="checkbox"/>
• Check cable.	<input checked="" type="checkbox"/>

Filing: Field file

Signature: [Signature]

Field Data Record Form  
Meter, Turbidity (Portable) Hach 2100P and 2100Q  
(QSF-421D)  
Page 1 of 1

Control number: UF08319  
Date (mm/dd/yyyy): 09/20/2022  
User (print name): J. Kowalski, K. Miller

Project number: 11194450 -09  
Project name: Greentech Environmental Services Annual Groundwater  
Location: Niagara Falls, NY

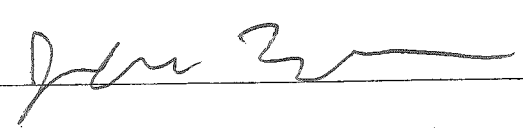
Additional equipment control numbers and descriptions:

10 NTU Standard Lot A0160  
100 NTU Standard Lot A0163  
800 NTU Standard Lot A0163

Field procedure before use:

Do not calibrate in the field.		Check when completed								
<p>Check kit contents;</p> <ul style="list-style-type: none"> <li>• Meter</li> <li>• STABLCAL standards (2100Q)</li> <li>• Low 0-10, medium 0-100, high standards (2 100P)</li> <li>• Extra AA batteries</li> <li>• Sample vials</li> </ul>	<div style="display: flex; flex-direction: column; align-items: center;"> <div style="margin-bottom: 10px;"> <input checked="" type="checkbox"/>  <input checked="" type="checkbox"/>  <input checked="" type="checkbox"/>  <input checked="" type="checkbox"/>  <input checked="" type="checkbox"/> </div> <input checked="" type="checkbox"/> </div>									
<p>Test and record standards:</p> <table style="width: 100%; margin-top: 10px;"> <thead> <tr> <th style="text-align: left;">Gelex (2100P)/STABLCAL (2100Q) Standard</th> <th style="text-align: left;">Meter Reading</th> </tr> </thead> <tbody> <tr> <td><u>10 NTU</u></td> <td><u>9.93</u></td> </tr> <tr> <td><u>100 NTU</u></td> <td><u>94.7</u></td> </tr> <tr> <td><u>800 NTU</u></td> <td><u>772</u></td> </tr> </tbody> </table>			Gelex (2100P)/STABLCAL (2100Q) Standard	Meter Reading	<u>10 NTU</u>	<u>9.93</u>	<u>100 NTU</u>	<u>94.7</u>	<u>800 NTU</u>	<u>772</u>
Gelex (2100P)/STABLCAL (2100Q) Standard	Meter Reading									
<u>10 NTU</u>	<u>9.93</u>									
<u>100 NTU</u>	<u>94.7</u>									
<u>800 NTU</u>	<u>772</u>									
<p>Note: Condensation on outside of sample bottles affects meter readings.</p>										

Filing: Field file

Signature: 

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

Date:

09/20/2022  
(mm/dd/yyyy)

Reference No.

11194950-09

**Instruments**

- ☒ Water level indicator
- ☐ Steel tape
- ☒ Oil/Water interface probe
- ☐ Air monitoring equipment

**Supplies**

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

**Documentation**

- ☐ Well logs
- ☒ Notebook/Field book
- ☐ Photolog
- ☐ Site pass/badge
- ☒ Previous well logs/previous historical well data
- ☐ Site map
- ☒ Blank well data forms

**Miscellaneous**

- ☒ Well cap keys
- ☒ Bolt cutters
- ☐ Camera/Film
- ☒ Knife
- ☒ Spare batteries for instruments
- ☐ Lock deicer (winter)

**Personal Protective Equipment**

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

- ☒ Pen/Pencil/Indelible marking pen
- ☒ Tool box
- ☒ Spare locks/keys
- On site transportation  
(all-terrain vehicle/snowmobiles)

Completed By:

Kevin Miller  
(please print)

Date:

09/20/2022  
(mm/dd/yyyy)



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

Date: 09/20/2022  
(mm/dd/yyyy)

Reference No. 11194450-09

Equipment

- ☒ Required sampling equipment  
(as per work plan or QAPP)

Instruments

- Water level indicator  
Thermometer \*  
☒ pH meter \*  
☒ Conductivity probe \*  
☒ Turbidity meter  
☐ HNu/OVA/Microtip  
☐ Air monitoring equipment

Supplies

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

Documentation

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

Miscellaneous

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

Completed By: Jacob Krawiec  
(please print)

Date: 09/20/2022  
(mm/dd/yyyy)

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

Date:

09/20/2022  
(mm/dd/yyyy)

Reference No.

11194450-09

**Prior Planning and Coordination**

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

**Filed Procedure**

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

**Follow-Up Activities**

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

Completed By:

Kevin Miller  
(please print)

Date:

09/20/2022  
(mm/dd/yyyy)

# Graftech Groundwater Sampling

11194450-09

DAILY LOG 09/20/2022

Calibrated Horiba US2 meter Rental with auto cal

Solution Lot #21410018 Exp 11/09/22

Ph before 3.94 after 4.00

Cond 4.49 before 4.46 after 4.49

8:30 Arrived on site, performing water level measurement  
Weather: 59-77° Sunny, 9 mph E winds

10:15 Setup on Well GWB-B; Purge and sample

Set up trip blank TB-11194450-092022-KM

11:30 Setup on Well BW-4 Purge and sample

12:30 Setup on BW-3 Purge and sample

1:15 Pack up and off site

*[Signature]*

**Project Data:**

Project Name:

Ref. No.:

Date:

**Personnel:**

### Monitoring Well Data:

Well No.:

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)<sup>(1)</sup>:

Well Diameter, D (cm/in):

Well Screen Volume,  $V_s$  (L)<sup>(2)</sup>:

Initial Depth to Water (m/ft):

Sample ID:

WG-1194450-092022-KM-001

**Sample Time:**

115

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=  $V_p/V_s$ .
- (5) For conductivity, the average value of three readings  $<1$  mS/cm  $\pm 0.005$  mS/cm or where conductivity  $>1$  mS/cm  $\pm 0.01$  mS/cm.

Date: 09/20/22  
Personnel: K Miller, J Kowalski,  
J. J. J.

Saturated Screen Length (m/ft): \_\_\_\_\_  
 Depth to Pump Intake (m/ft)<sup>(1)</sup>: \_\_\_\_\_  
 Well Diameter, D (cm/in): \_\_\_\_\_  
 Well Screen Volume, V<sub>s</sub> (L)<sup>(2)</sup>: \_\_\_\_\_  
 Initial Depth to Water (m/ft): 13.40

[illegible]

Arzu

Project Data:

Project Name: Oratech 60 Sample - 29  
Ref. No.: 1194450-09

Date: 09/20/2002  
Personnel: K Miller, D Tyan,  
J Kowalski

Monitoring Well Data:

Well No.: 303

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)<sup>(1)</sup>:

Well Diameter, D (cm/in): \_\_\_\_\_

Well Screen Volume,  $V_s$  (L)<sup>(2)</sup>: \_\_\_\_\_

Initial Depth to Water (m/ft): 13.54

[illegible]

Sample ID:

W6- 119 4450-092022-TL-004

Sample Time:

1315

Notes:

MS/MSD

- (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,  $V_s = \pi \cdot (r^2) \cdot L$  in mL, where  $r$  ( $r=D/2$ ) and L are in cm. For Imperial units,  $V_s = \pi \cdot (r^2) \cdot L \cdot (2.54)^3$ , 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=  $V_p/V_s$ .
- (5) For conductivity, the average value of three readings  $<1$  mS/cm  $\pm 0.005$  mS/cm or where conductivity  $>1$  mS/cm  $\pm 0.01$  mS/cm.

Good-Kennel



# CHAIN OF CUSTODY RECORD

COC NO.:

Address: \_\_\_\_\_ PAGE \_\_\_\_ OF \_\_\_\_

Phone: \_\_\_\_\_ Fax: \_\_\_\_\_

Project No/ Phase/Task Code:				Laboratory Name:				Lab Location:				SSOW ID:												
Project Name:				Lab Contact:								Cooler No:												
Project Location:				SAMPLE TYPE		ANALYSIS REQUESTED (See Back of COC for Definitions)										Carrier:								
GHD Chemistry Contact:				Matrix Code (see back of COC)	Grab (G) or Comp (C)	Filtered (Y/N)															Total Containers/sample	MS/MSD Request	Airbill No:	
Sampler(s):																							Total # of Containers:	
Item	SAMPLE IDENTIFICATION (Containers for each sample may be combined on one line)			DATE (mm/dd/yy)	TIME (hh:mm)																	COMMENTS/ SPECIAL INSTRUCTIONS:		
PRESERVATION - (SEE BACK OF COC FOR ABBREVIATIONS)																								
1	W. - 117115 - 01202 - KM - 001			9/20/12	10:15	W	L																	
2	W. - 117115 - 01202 - T1 - 012			9/20/12	12:15	W	L																	
3	W. - 117115 - 01202 - T2 - 013			9/20/12	12:15	W	L																	
4	W. - 117115 - 01202 - T3 - 024			9/20/12	12:15	W	L																	
5	W. - 117115 - 01202 - T4 - 025			9/20/12	12:15	W	L																	
6																								
7																								
8																								
9																								
10																								
11																								
12																								

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

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

Notes/ Special Requirements:

RELINQUISHED BY	COMPANY	DATE	TIME	RECEIVED BY	COMPANY	DATE	TIME
1.				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

GHD Form: COC-10B (20110804)

# **Attachment B**

## **Field Parameters**



**Groundwater Quality Parameters  
Annual Groundwater Monitoring Program  
GrafTech International Holdings, Inc.  
Niagara Falls, New York  
September 2022**

Monitoring Well Location	Date	Time (hours:minutes)	Purge Rate (mL/min)	Water Level (ft. BTOR <sub>f</sub> )	Temperature (°C)	Conductivity (mS/cm)	Turbidity (NTU)	DO (mg/L)	pH (Units)	ORP (mV)
GW-8B	9/20/2022	10:44	100	11.43	14.9	1.75	3.50	0.38	6.76	12
		10:49	100	11.52	14.1	1.76	3.31	0.60	6.79	5
		10:54	84	11.53	14.1	1.75	3.90	0.08	6.79	0
		10:59	84	11.59	14.2	1.74	2.90	0.07	6.81	0
		11:04	80	11.60	14.1	1.73	3.83	0.02	6.81	0
		11:09	80	11.50	14.1	1.73	2.50	0.03	6.81	1
BW-3	9/20/2022	12:43	112	13.59	19.8	1.53	272	0.66	7.03	-70
		12:48	108	13.60	19.4	1.53	48.0	0.23	6.96	-74
		12:53	136	13.59	18.7	1.54	17.2	0.08	6.94	-80
		12:58	112	13.58	18.5	1.55	8.49	0.03	6.93	-82
		13:03	115	13.58	18.2	1.56	4.90	0.00	6.93	-83
BW-4	9/20/2022	11:41	96	13.40	17.8	1.58	5.86	1.14	6.86	-92
		11:46	80	13.40	17.9	1.62	4.33	0.76	6.77	-98
		11:51	72	13.42	18.1	1.61	3.28	0.57	6.77	-97
		11:56	60	13.42	18.2	1.62	2.25	0.55	6.76	-98
		12:01	68	13.41	18.4	1.61	2.17	0.46	6.77	-98
		12:06	80	13.42	18.5	1.58	1.81	0.40	6.76	-102
		12:11	88	13.43	18.3	1.62	1.31	0.42	6.77	-103

## Notes:

ft. BTOR<sub>f</sub> - 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**

## ANALYTICAL REPORT

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

Laboratory Job ID: 480-201805-1  
Client Project/Site: 11194450, GrafTech

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

Attn: Ms. Sue Scrocchi



Authorized for release by:  
9/26/2022 8:54:39 AM

Denise Heckler, Project Manager II  
(330)966-9477

[Denise.Heckler@et.eurofinsus.com](mailto:Denise.Heckler@et.eurofinsus.com)

### LINKS

Review your project  
results through



Have a Question?



Visit us at:

[www.eurofinsus.com/Env](http://www.eurofinsus.com/Env)

The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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# Definitions/Glossary

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

Job ID: 480-201805-1

## Qualifiers

### GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	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: 480-201805-1

**Job ID: 480-201805-1**

**Laboratory: Eurofins Buffalo**

## Narrative

**Job Narrative**  
**480-201805-1**

## Comments

No additional comments.

## Receipt

The samples were received on 9/20/2022 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 3.2° C.

## GC/MS VOA

Method 8260C: The following samples were diluted to bring the concentration of target analytes within the calibration range: WG-11194450-092022-JK-002 (480-201805-2) and WG-11194450-092022-JK-003 (480-201805-3). Elevated reporting limits (RLs) are provided.

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: 480-201805-1

## Client Sample ID: WG-11194450-092022-KM-001

Lab Sample ID: 480-201805-1

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
Chloromethane	0.48	J	1.0	0.35	ug/L	1		8260C	Total/NA
cis-1,2-Dichloroethene	20		1.0	0.81	ug/L	1		8260C	Total/NA
Trichloroethene	4.3		1.0	0.46	ug/L	1		8260C	Total/NA
Vinyl chloride	4.6		1.0	0.90	ug/L	1		8260C	Total/NA

## Client Sample ID: WG-11194450-092022-JK-002

Lab Sample ID: 480-201805-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,2,2-Tetrachloroethane	2.0		2.0	0.42	ug/L	2		8260C	Total/NA
1,1-Dichloroethylene	3.2		2.0	0.58	ug/L	2		8260C	Total/NA
Chloroform	5.1		2.0	0.68	ug/L	2		8260C	Total/NA
Vinyl chloride	120		2.0	1.8	ug/L	2		8260C	Total/NA
1,2-Dichloroethene, Total - DL	720		20	8.1	ug/L	10		8260C	Total/NA
cis-1,2-Dichloroethene - DL	720		10	8.1	ug/L	10		8260C	Total/NA
Tetrachloroethene - DL	350		10	3.6	ug/L	10		8260C	Total/NA
Trichloroethene - DL	440		10	4.6	ug/L	10		8260C	Total/NA

## Client Sample ID: WG-11194450-092022-JK-003

Lab Sample ID: 480-201805-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2-Dichloroethene, Total	810		40	16	ug/L	20		8260C	Total/NA
Chloroform	6.8	J	20	6.8	ug/L	20		8260C	Total/NA
cis-1,2-Dichloroethene	810		20	16	ug/L	20		8260C	Total/NA
Tetrachloroethene	370		20	7.2	ug/L	20		8260C	Total/NA
Trichloroethene	480		20	9.2	ug/L	20		8260C	Total/NA
Vinyl chloride	140		20	18	ug/L	20		8260C	Total/NA

## Client Sample ID: WG-11194450-092022-JK-004

Lab Sample ID: 480-201805-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Vinyl chloride	4.1		1.0	0.90	ug/L	1		8260C	Total/NA

## Client Sample ID: TB-11194450-092022-KM

Lab Sample ID: 480-201805-5

No Detections.

This Detection Summary does not include radiochemical test results.

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# Client Sample Results

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

Job ID: 480-201805-1

Client Sample ID: WG-11194450-092022-KM-001

Lab Sample ID: 480-201805-1

Date Collected: 09/20/22 11:15

Matrix: Water

Date Received: 09/20/22 16:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			09/22/22 04:25	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			09/22/22 04:25	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			09/22/22 04:25	1
1,1-Dichloroethylene	ND		1.0	0.29	ug/L			09/22/22 04:25	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			09/22/22 04:25	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			09/22/22 04:25	1
<b>1,2-Dichloroethene, Total</b>	<b>20</b>		2.0	0.81	ug/L			09/22/22 04:25	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			09/22/22 04:25	1
2-Butanone	ND		10	1.3	ug/L			09/22/22 04:25	1
2-Hexanone	ND		5.0	1.2	ug/L			09/22/22 04:25	1
4-Methyl-2-pentanone	ND		5.0	2.1	ug/L			09/22/22 04:25	1
Acetone	ND		10	3.0	ug/L			09/22/22 04:25	1
Benzene	ND		1.0	0.41	ug/L			09/22/22 04:25	1
Bromodichloromethane	ND		1.0	0.39	ug/L			09/22/22 04:25	1
Bromoform	ND		1.0	0.26	ug/L			09/22/22 04:25	1
Bromomethane	ND		1.0	0.69	ug/L			09/22/22 04:25	1
Carbon disulfide	ND		1.0	0.19	ug/L			09/22/22 04:25	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			09/22/22 04:25	1
Chlorobenzene	ND		1.0	0.75	ug/L			09/22/22 04:25	1
Chloroethane	ND		1.0	0.32	ug/L			09/22/22 04:25	1
Chloroform	ND		1.0	0.34	ug/L			09/22/22 04:25	1
<b>Chloromethane</b>	<b>0.48 J</b>		1.0	0.35	ug/L			09/22/22 04:25	1
<b>cis-1,2-Dichloroethene</b>	<b>20</b>		1.0	0.81	ug/L			09/22/22 04:25	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			09/22/22 04:25	1
Dibromochloromethane	ND		1.0	0.32	ug/L			09/22/22 04:25	1
Ethylbenzene	ND		1.0	0.74	ug/L			09/22/22 04:25	1
Methylene Chloride	ND		1.0	0.44	ug/L			09/22/22 04:25	1
Styrene	ND		1.0	0.73	ug/L			09/22/22 04:25	1
Tetrachloroethene	ND		1.0	0.36	ug/L			09/22/22 04:25	1
Toluene	ND		1.0	0.51	ug/L			09/22/22 04:25	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			09/22/22 04:25	1
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			09/22/22 04:25	1
<b>Trichloroethene</b>	<b>4.3</b>		1.0	0.46	ug/L			09/22/22 04:25	1
<b>Vinyl chloride</b>	<b>4.6</b>		1.0	0.90	ug/L			09/22/22 04:25	1
Xylenes, Total	ND		2.0	0.66	ug/L			09/22/22 04:25	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	89		77 - 120					09/22/22 04:25	1
4-Bromofluorobenzene (Surr)	100		73 - 120					09/22/22 04:25	1
Dibromofluoromethane (Surr)	102		75 - 123					09/22/22 04:25	1
Toluene-d8 (Surr)	90		80 - 120					09/22/22 04:25	1

Client Sample ID: WG-11194450-092022-JK-002

Lab Sample ID: 480-201805-2

Date Collected: 09/20/22 12:15

Matrix: Water

Date Received: 09/20/22 16:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		2.0	1.6	ug/L			09/22/22 04:47	2
<b>1,1,2,2-Tetrachloroethane</b>	<b>2.0</b>		2.0	0.42	ug/L			09/22/22 04:47	2

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# Client Sample Results

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

Job ID: 480-201805-1

Client Sample ID: WG-11194450-092022-JK-002

Lab Sample ID: 480-201805-2

Date Collected: 09/20/22 12:15

Matrix: Water

Date Received: 09/20/22 16:00

## 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		2.0	0.46	ug/L			09/22/22 04:47	2
<b>1,1-Dichloroethylene</b>	<b>3.2</b>		2.0	0.58	ug/L			09/22/22 04:47	2
1,1-Dichloroethane	ND		2.0	0.76	ug/L			09/22/22 04:47	2
1,2-Dichloroethane	ND		2.0	0.42	ug/L			09/22/22 04:47	2
1,2-Dichloropropane	ND		2.0	1.4	ug/L			09/22/22 04:47	2
2-Butanone	ND		20	2.6	ug/L			09/22/22 04:47	2
2-Hexanone	ND		10	2.5	ug/L			09/22/22 04:47	2
4-Methyl-2-pentanone	ND		10	4.2	ug/L			09/22/22 04:47	2
Acetone	ND		20	6.0	ug/L			09/22/22 04:47	2
Benzene	ND		2.0	0.82	ug/L			09/22/22 04:47	2
Bromodichloromethane	ND		2.0	0.78	ug/L			09/22/22 04:47	2
Bromoform	ND		2.0	0.52	ug/L			09/22/22 04:47	2
Bromomethane	ND		2.0	1.4	ug/L			09/22/22 04:47	2
Carbon disulfide	ND		2.0	0.38	ug/L			09/22/22 04:47	2
Carbon tetrachloride	ND		2.0	0.54	ug/L			09/22/22 04:47	2
Chlorobenzene	ND		2.0	1.5	ug/L			09/22/22 04:47	2
Chloroethane	ND		2.0	0.64	ug/L			09/22/22 04:47	2
<b>Chloroform</b>	<b>5.1</b>		2.0	0.68	ug/L			09/22/22 04:47	2
Chloromethane	ND		2.0	0.70	ug/L			09/22/22 04:47	2
cis-1,3-Dichloropropene	ND		2.0	0.72	ug/L			09/22/22 04:47	2
Dibromochloromethane	ND		2.0	0.64	ug/L			09/22/22 04:47	2
Ethylbenzene	ND		2.0	1.5	ug/L			09/22/22 04:47	2
Methylene Chloride	ND		2.0	0.88	ug/L			09/22/22 04:47	2
Styrene	ND		2.0	1.5	ug/L			09/22/22 04:47	2
Toluene	ND		2.0	1.0	ug/L			09/22/22 04:47	2
trans-1,3-Dichloropropene	ND		2.0	0.74	ug/L			09/22/22 04:47	2
<b>Vinyl chloride</b>	<b>120</b>		2.0	1.8	ug/L			09/22/22 04:47	2
Xylenes, Total	ND		4.0	1.3	ug/L			09/22/22 04:47	2

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	88		77 - 120		09/22/22 04:47	2
4-Bromofluorobenzene (Surr)	99		73 - 120		09/22/22 04:47	2
Dibromofluoromethane (Surr)	101		75 - 123		09/22/22 04:47	2
Toluene-d8 (Surr)	90		80 - 120		09/22/22 04:47	2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>1,2-Dichloroethene, Total</b>	<b>720</b>		20	8.1	ug/L			09/22/22 18:35	10
<b>cis-1,2-Dichloroethene</b>	<b>720</b>		10	8.1	ug/L			09/22/22 18:35	10
<b>Tetrachloroethene</b>	<b>350</b>		10	3.6	ug/L			09/22/22 18:35	10
trans-1,2-Dichloroethene	ND		10	9.0	ug/L			09/22/22 18:35	10
<b>Trichloroethene</b>	<b>440</b>		10	4.6	ug/L			09/22/22 18:35	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	89		77 - 120		09/22/22 18:35	10
4-Bromofluorobenzene (Surr)	98		73 - 120		09/22/22 18:35	10
Dibromofluoromethane (Surr)	101		75 - 123		09/22/22 18:35	10
Toluene-d8 (Surr)	89		80 - 120		09/22/22 18:35	10

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# Client Sample Results

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

Job ID: 480-201805-1

Client Sample ID: WG-11194450-092022-JK-003

Lab Sample ID: 480-201805-3

Date Collected: 09/20/22 12:15

Matrix: Water

Date Received: 09/20/22 16:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		20	16	ug/L			09/22/22 05:09	20
1,1,2,2-Tetrachloroethane	ND		20	4.2	ug/L			09/22/22 05:09	20
1,1,2-Trichloroethane	ND		20	4.6	ug/L			09/22/22 05:09	20
1,1-Dichloroethylene	ND		20	5.8	ug/L			09/22/22 05:09	20
1,1-Dichloroethane	ND		20	7.6	ug/L			09/22/22 05:09	20
1,2-Dichloroethane	ND		20	4.2	ug/L			09/22/22 05:09	20
<b>1,2-Dichloroethene, Total</b>	<b>810</b>		40	16	ug/L			09/22/22 05:09	20
1,2-Dichloropropane	ND		20	14	ug/L			09/22/22 05:09	20
2-Butanone	ND		200	26	ug/L			09/22/22 05:09	20
2-Hexanone	ND		100	25	ug/L			09/22/22 05:09	20
4-Methyl-2-pentanone	ND		100	42	ug/L			09/22/22 05:09	20
Acetone	ND		200	60	ug/L			09/22/22 05:09	20
Benzene	ND		20	8.2	ug/L			09/22/22 05:09	20
Bromodichloromethane	ND		20	7.8	ug/L			09/22/22 05:09	20
Bromoform	ND		20	5.2	ug/L			09/22/22 05:09	20
Bromomethane	ND		20	14	ug/L			09/22/22 05:09	20
Carbon disulfide	ND		20	3.8	ug/L			09/22/22 05:09	20
Carbon tetrachloride	ND		20	5.4	ug/L			09/22/22 05:09	20
Chlorobenzene	ND		20	15	ug/L			09/22/22 05:09	20
Chloroethane	ND		20	6.4	ug/L			09/22/22 05:09	20
<b>Chloroform</b>	<b>6.8 J</b>		20	6.8	ug/L			09/22/22 05:09	20
Chloromethane	ND		20	7.0	ug/L			09/22/22 05:09	20
<b>cis-1,2-Dichloroethene</b>	<b>810</b>		20	16	ug/L			09/22/22 05:09	20
cis-1,3-Dichloropropene	ND		20	7.2	ug/L			09/22/22 05:09	20
Dibromochloromethane	ND		20	6.4	ug/L			09/22/22 05:09	20
Ethylbenzene	ND		20	15	ug/L			09/22/22 05:09	20
Methylene Chloride	ND		20	8.8	ug/L			09/22/22 05:09	20
Styrene	ND		20	15	ug/L			09/22/22 05:09	20
<b>Tetrachloroethene</b>	<b>370</b>		20	7.2	ug/L			09/22/22 05:09	20
Toluene	ND		20	10	ug/L			09/22/22 05:09	20
trans-1,2-Dichloroethene	ND		20	18	ug/L			09/22/22 05:09	20
trans-1,3-Dichloropropene	ND		20	7.4	ug/L			09/22/22 05:09	20
<b>Trichloroethene</b>	<b>480</b>		20	9.2	ug/L			09/22/22 05:09	20
<b>Vinyl chloride</b>	<b>140</b>		20	18	ug/L			09/22/22 05:09	20
Xylenes, Total	ND		40	13	ug/L			09/22/22 05:09	20
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	90		77 - 120					09/22/22 05:09	20
4-Bromofluorobenzene (Surr)	101		73 - 120					09/22/22 05:09	20
Dibromofluoromethane (Surr)	103		75 - 123					09/22/22 05:09	20
Toluene-d8 (Surr)	89		80 - 120					09/22/22 05:09	20

Client Sample ID: WG-11194450-092022-JK-004

Lab Sample ID: 480-201805-4

Date Collected: 09/20/22 13:15

Matrix: Water

Date Received: 09/20/22 16:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			09/22/22 18:57	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			09/22/22 18:57	1

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# Client Sample Results

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

Job ID: 480-201805-1

Client Sample ID: WG-11194450-092022-JK-004

Lab Sample ID: 480-201805-4

Date Collected: 09/20/22 13:15

Matrix: Water

Date Received: 09/20/22 16:00

## 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			09/22/22 18:57	1
1,1-Dichloroethylene	ND		1.0	0.29	ug/L			09/22/22 18:57	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			09/22/22 18:57	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			09/22/22 18:57	1
1,2-Dichloroethene, Total	ND		2.0	0.81	ug/L			09/22/22 18:57	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			09/22/22 18:57	1
2-Butanone	ND		10	1.3	ug/L			09/22/22 18:57	1
2-Hexanone	ND		5.0	1.2	ug/L			09/22/22 18:57	1
4-Methyl-2-pentanone	ND		5.0	2.1	ug/L			09/22/22 18:57	1
Acetone	ND		10	3.0	ug/L			09/22/22 18:57	1
Benzene	ND		1.0	0.41	ug/L			09/22/22 18:57	1
Bromodichloromethane	ND		1.0	0.39	ug/L			09/22/22 18:57	1
Bromoform	ND		1.0	0.26	ug/L			09/22/22 18:57	1
Bromomethane	ND		1.0	0.69	ug/L			09/22/22 18:57	1
Carbon disulfide	ND		1.0	0.19	ug/L			09/22/22 18:57	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			09/22/22 18:57	1
Chlorobenzene	ND		1.0	0.75	ug/L			09/22/22 18:57	1
Chloroethane	ND		1.0	0.32	ug/L			09/22/22 18:57	1
Chloroform	ND		1.0	0.34	ug/L			09/22/22 18:57	1
Chloromethane	ND		1.0	0.35	ug/L			09/22/22 18:57	1
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			09/22/22 18:57	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			09/22/22 18:57	1
Dibromochloromethane	ND		1.0	0.32	ug/L			09/22/22 18:57	1
Ethylbenzene	ND		1.0	0.74	ug/L			09/22/22 18:57	1
Methylene Chloride	ND		1.0	0.44	ug/L			09/22/22 18:57	1
Styrene	ND		1.0	0.73	ug/L			09/22/22 18:57	1
Tetrachloroethene	ND		1.0	0.36	ug/L			09/22/22 18:57	1
Toluene	ND		1.0	0.51	ug/L			09/22/22 18:57	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			09/22/22 18:57	1
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			09/22/22 18:57	1
Trichloroethene	ND		1.0	0.46	ug/L			09/22/22 18:57	1
Vinyl chloride	4.1		1.0	0.90	ug/L			09/22/22 18:57	1
Xylenes, Total	ND		2.0	0.66	ug/L			09/22/22 18:57	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	90		77 - 120		09/22/22 18:57	1
4-Bromofluorobenzene (Surr)	95		73 - 120		09/22/22 18:57	1
Dibromofluoromethane (Surr)	100		75 - 123		09/22/22 18:57	1
Toluene-d8 (Surr)	91		80 - 120		09/22/22 18:57	1

Client Sample ID: TB-11194450-092022-KM

Lab Sample ID: 480-201805-5

Date Collected: 09/20/22 00:00

Matrix: Water

Date Received: 09/20/22 16:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			09/22/22 05:53	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			09/22/22 05:53	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			09/22/22 05:53	1
1,1-Dichloroethylene	ND		1.0	0.29	ug/L			09/22/22 05:53	1

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# Client Sample Results

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

Job ID: 480-201805-1

Client Sample ID: TB-11194450-092022-KM

Lab Sample ID: 480-201805-5

Date Collected: 09/20/22 00:00

Matrix: Water

Date Received: 09/20/22 16:00

## 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			09/22/22 05:53	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			09/22/22 05:53	1
1,2-Dichloroethene, Total	ND		2.0	0.81	ug/L			09/22/22 05:53	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			09/22/22 05:53	1
2-Butanone	ND		10	1.3	ug/L			09/22/22 05:53	1
2-Hexanone	ND		5.0	1.2	ug/L			09/22/22 05:53	1
4-Methyl-2-pentanone	ND		5.0	2.1	ug/L			09/22/22 05:53	1
Acetone	ND		10	3.0	ug/L			09/22/22 05:53	1
Benzene	ND		1.0	0.41	ug/L			09/22/22 05:53	1
Bromodichloromethane	ND		1.0	0.39	ug/L			09/22/22 05:53	1
Bromoform	ND		1.0	0.26	ug/L			09/22/22 05:53	1
Bromomethane	ND		1.0	0.69	ug/L			09/22/22 05:53	1
Carbon disulfide	ND		1.0	0.19	ug/L			09/22/22 05:53	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			09/22/22 05:53	1
Chlorobenzene	ND		1.0	0.75	ug/L			09/22/22 05:53	1
Chloroethane	ND		1.0	0.32	ug/L			09/22/22 05:53	1
Chloroform	ND		1.0	0.34	ug/L			09/22/22 05:53	1
Chloromethane	ND		1.0	0.35	ug/L			09/22/22 05:53	1
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			09/22/22 05:53	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			09/22/22 05:53	1
Dibromochloromethane	ND		1.0	0.32	ug/L			09/22/22 05:53	1
Ethylbenzene	ND		1.0	0.74	ug/L			09/22/22 05:53	1
Methylene Chloride	ND		1.0	0.44	ug/L			09/22/22 05:53	1
Styrene	ND		1.0	0.73	ug/L			09/22/22 05:53	1
Tetrachloroethene	ND		1.0	0.36	ug/L			09/22/22 05:53	1
Toluene	ND		1.0	0.51	ug/L			09/22/22 05:53	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			09/22/22 05:53	1
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			09/22/22 05:53	1
Trichloroethene	ND		1.0	0.46	ug/L			09/22/22 05:53	1
Vinyl chloride	ND		1.0	0.90	ug/L			09/22/22 05:53	1
Xylenes, Total	ND		2.0	0.66	ug/L			09/22/22 05:53	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	88		77 - 120		09/22/22 05:53	1
4-Bromofluorobenzene (Surr)	97		73 - 120		09/22/22 05:53	1
Dibromofluoromethane (Surr)	101		75 - 123		09/22/22 05:53	1
Toluene-d8 (Surr)	90		80 - 120		09/22/22 05:53	1

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# Surrogate Summary

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

Job ID: 480-201805-1

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

**Matrix: Water**

**Prep Type: Total/NA**

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCA (77-120)	BFB (73-120)	DBFM (75-123)	TOL (80-120)
480-201805-1	WG-11194450-092022-KM-001	89	100	102	90
480-201805-2	WG-11194450-092022-JK-002	88	99	101	90
480-201805-2 - DL	WG-11194450-092022-JK-002	89	98	101	89
480-201805-3	WG-11194450-092022-JK-003	90	101	103	89
480-201805-4	WG-11194450-092022-JK-004	90	95	100	91
480-201805-4 MS	WG-11194450-092022-JK-004	89	97	101	96
480-201805-4 MSD	WG-11194450-092022-JK-004	87	100	97	96
480-201805-5	TB-11194450-092022-KM	88	97	101	90
LCS 480-642221/6	Lab Control Sample	88	99	100	95
LCS 480-642372/5	Lab Control Sample	87	98	96	94
MB 480-642221/8	Method Blank	88	97	99	89
MB 480-642372/7	Method Blank	89	99	100	90

## Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

TOL = Toluene-d8 (Surr)

# QC Sample Results

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

Job ID: 480-201805-1

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

Lab Sample ID: MB 480-642221/8

Matrix: Water

Analysis Batch: 642221

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			09/22/22 00:22	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			09/22/22 00:22	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			09/22/22 00:22	1
1,1-Dichloroethylene	ND		1.0	0.29	ug/L			09/22/22 00:22	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			09/22/22 00:22	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			09/22/22 00:22	1
1,2-Dichloroethene, Total	ND		2.0	0.81	ug/L			09/22/22 00:22	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			09/22/22 00:22	1
2-Butanone	ND		10	1.3	ug/L			09/22/22 00:22	1
2-Hexanone	ND		5.0	1.2	ug/L			09/22/22 00:22	1
4-Methyl-2-pentanone	ND		5.0	2.1	ug/L			09/22/22 00:22	1
Acetone	ND		10	3.0	ug/L			09/22/22 00:22	1
Benzene	ND		1.0	0.41	ug/L			09/22/22 00:22	1
Bromodichloromethane	ND		1.0	0.39	ug/L			09/22/22 00:22	1
Bromoform	ND		1.0	0.26	ug/L			09/22/22 00:22	1
Bromomethane	ND		1.0	0.69	ug/L			09/22/22 00:22	1
Carbon disulfide	ND		1.0	0.19	ug/L			09/22/22 00:22	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			09/22/22 00:22	1
Chlorobenzene	ND		1.0	0.75	ug/L			09/22/22 00:22	1
Chloroethane	ND		1.0	0.32	ug/L			09/22/22 00:22	1
Chloroform	ND		1.0	0.34	ug/L			09/22/22 00:22	1
Chloromethane	ND		1.0	0.35	ug/L			09/22/22 00:22	1
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			09/22/22 00:22	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			09/22/22 00:22	1
Dibromochloromethane	ND		1.0	0.32	ug/L			09/22/22 00:22	1
Ethylbenzene	ND		1.0	0.74	ug/L			09/22/22 00:22	1
Methylene Chloride	ND		1.0	0.44	ug/L			09/22/22 00:22	1
Styrene	ND		1.0	0.73	ug/L			09/22/22 00:22	1
Tetrachloroethene	ND		1.0	0.36	ug/L			09/22/22 00:22	1
Toluene	ND		1.0	0.51	ug/L			09/22/22 00:22	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			09/22/22 00:22	1
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			09/22/22 00:22	1
Trichloroethene	ND		1.0	0.46	ug/L			09/22/22 00:22	1
Vinyl chloride	ND		1.0	0.90	ug/L			09/22/22 00:22	1
Xylenes, Total	ND		2.0	0.66	ug/L			09/22/22 00:22	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	88		77 - 120		09/22/22 00:22	1
4-Bromofluorobenzene (Surr)	97		73 - 120		09/22/22 00:22	1
Dibromofluoromethane (Surr)	99		75 - 123		09/22/22 00:22	1
Toluene-d8 (Surr)	89		80 - 120		09/22/22 00:22	1

Lab Sample ID: LCS 480-642221/6

Matrix: Water

Analysis Batch: 642221

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	23.5		ug/L		94	73 - 126

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# QC Sample Results

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

Job ID: 480-201805-1

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

Lab Sample ID: LCS 480-642221/6

Matrix: Water

Analysis Batch: 642221

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	24.1		ug/L		96	76 - 120
1,1,2-Trichloroethane	25.0	25.0		ug/L		100	76 - 122
1,1-Dichloroethylene	25.0	27.5		ug/L		110	66 - 127
1,1-Dichloroethane	25.0	24.7		ug/L		99	77 - 120
1,2-Dichloroethane	25.0	22.1		ug/L		88	75 - 120
1,2-Dichloroethene, Total	50.0	52.4		ug/L		105	72 - 124
1,2-Dichloropropane	25.0	23.9		ug/L		96	76 - 120
2-Butanone	125	116		ug/L		93	57 - 140
2-Hexanone	125	124		ug/L		99	65 - 127
4-Methyl-2-pentanone	125	122		ug/L		98	71 - 125
Acetone	125	124		ug/L		99	56 - 142
Benzene	25.0	25.5		ug/L		102	71 - 124
Bromodichloromethane	25.0	24.0		ug/L		96	80 - 122
Bromoform	25.0	26.4		ug/L		106	61 - 132
Bromomethane	25.0	23.7		ug/L		95	55 - 144
Carbon disulfide	25.0	27.7		ug/L		111	59 - 134
Carbon tetrachloride	25.0	24.3		ug/L		97	72 - 134
Chlorobenzene	25.0	25.3		ug/L		101	80 - 120
Chloroethane	25.0	20.8		ug/L		83	69 - 136
Chloroform	25.0	24.4		ug/L		98	73 - 127
Chloromethane	25.0	25.1		ug/L		100	68 - 124
cis-1,2-Dichloroethene	25.0	26.1		ug/L		104	74 - 124
cis-1,3-Dichloropropene	25.0	23.0		ug/L		92	74 - 124
Dibromochloromethane	25.0	26.2		ug/L		105	75 - 125
Ethylbenzene	25.0	24.6		ug/L		98	77 - 123
Methylene Chloride	25.0	27.5		ug/L		110	75 - 124
Styrene	25.0	25.4		ug/L		102	80 - 120
Tetrachloroethene	25.0	26.2		ug/L		105	74 - 122
Toluene	25.0	26.2		ug/L		105	80 - 122
trans-1,2-Dichloroethene	25.0	26.3		ug/L		105	73 - 127
trans-1,3-Dichloropropene	25.0	22.9		ug/L		91	80 - 120
Trichloroethene	25.0	24.7		ug/L		99	74 - 123
Vinyl chloride	25.0	22.8		ug/L		91	65 - 133
Xylenes, Total	50.0	50.8		ug/L		102	76 - 122

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	88		77 - 120
4-Bromofluorobenzene (Surr)	99		73 - 120
Dibromofluoromethane (Surr)	100		75 - 123
Toluene-d8 (Surr)	95		80 - 120

Lab Sample ID: MB 480-642372/7

Matrix: Water

Analysis Batch: 642372

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			09/22/22 12:37	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			09/22/22 12:37	1

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# QC Sample Results

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

Job ID: 480-201805-1

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

Lab Sample ID: MB 480-642372/7

Matrix: Water

Analysis Batch: 642372

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			09/22/22 12:37	1
1,1-Dichloroethylene	ND		1.0	0.29	ug/L			09/22/22 12:37	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			09/22/22 12:37	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			09/22/22 12:37	1
1,2-Dichloroethene, Total	ND		2.0	0.81	ug/L			09/22/22 12:37	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			09/22/22 12:37	1
2-Butanone	ND		10	1.3	ug/L			09/22/22 12:37	1
2-Hexanone	ND		5.0	1.2	ug/L			09/22/22 12:37	1
4-Methyl-2-pentanone	ND		5.0	2.1	ug/L			09/22/22 12:37	1
Acetone	ND		10	3.0	ug/L			09/22/22 12:37	1
Benzene	ND		1.0	0.41	ug/L			09/22/22 12:37	1
Bromodichloromethane	ND		1.0	0.39	ug/L			09/22/22 12:37	1
Bromoform	ND		1.0	0.26	ug/L			09/22/22 12:37	1
Bromomethane	ND		1.0	0.69	ug/L			09/22/22 12:37	1
Carbon disulfide	ND		1.0	0.19	ug/L			09/22/22 12:37	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			09/22/22 12:37	1
Chlorobenzene	ND		1.0	0.75	ug/L			09/22/22 12:37	1
Chloroethane	ND		1.0	0.32	ug/L			09/22/22 12:37	1
Chloroform	ND		1.0	0.34	ug/L			09/22/22 12:37	1
Chloromethane	ND		1.0	0.35	ug/L			09/22/22 12:37	1
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			09/22/22 12:37	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			09/22/22 12:37	1
Dibromochloromethane	ND		1.0	0.32	ug/L			09/22/22 12:37	1
Ethylbenzene	ND		1.0	0.74	ug/L			09/22/22 12:37	1
Methylene Chloride	ND		1.0	0.44	ug/L			09/22/22 12:37	1
Styrene	ND		1.0	0.73	ug/L			09/22/22 12:37	1
Tetrachloroethene	ND		1.0	0.36	ug/L			09/22/22 12:37	1
Toluene	ND		1.0	0.51	ug/L			09/22/22 12:37	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			09/22/22 12:37	1
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			09/22/22 12:37	1
Trichloroethene	ND		1.0	0.46	ug/L			09/22/22 12:37	1
Vinyl chloride	ND		1.0	0.90	ug/L			09/22/22 12:37	1
Xylenes, Total	ND		2.0	0.66	ug/L			09/22/22 12:37	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	89		77 - 120		09/22/22 12:37	1
4-Bromofluorobenzene (Surr)	99		73 - 120		09/22/22 12:37	1
Dibromofluoromethane (Surr)	100		75 - 123		09/22/22 12:37	1
Toluene-d8 (Surr)	90		80 - 120		09/22/22 12:37	1

Lab Sample ID: LCS 480-642372/5

Matrix: Water

Analysis Batch: 642372

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	22.0		ug/L		88	73 - 126
1,1,2,2-Tetrachloroethane	25.0	24.4		ug/L		97	76 - 120
1,1,2-Trichloroethane	25.0	25.4		ug/L		102	76 - 122

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# QC Sample Results

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

Job ID: 480-201805-1

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

Lab Sample ID: LCS 480-642372/5

Matrix: Water

Analysis Batch: 642372

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1-Dichlorethylene	25.0	25.0		ug/L		100	66 - 127
1,1-Dichloroethane	25.0	23.2		ug/L		93	77 - 120
1,2-Dichloroethane	25.0	21.5		ug/L		86	75 - 120
1,2-Dichloroethene, Total	50.0	49.2		ug/L		98	72 - 124
1,2-Dichloropropane	25.0	23.9		ug/L		95	76 - 120
2-Butanone	125	123		ug/L		98	57 - 140
2-Hexanone	125	124		ug/L		99	65 - 127
4-Methyl-2-pentanone	125	119		ug/L		95	71 - 125
Acetone	125	132		ug/L		106	56 - 142
Benzene	25.0	24.3		ug/L		97	71 - 124
Bromodichloromethane	25.0	23.6		ug/L		94	80 - 122
Bromoform	25.0	26.3		ug/L		105	61 - 132
Bromomethane	25.0	20.4		ug/L		82	55 - 144
Carbon disulfide	25.0	24.6		ug/L		98	59 - 134
Carbon tetrachloride	25.0	23.0		ug/L		92	72 - 134
Chlorobenzene	25.0	24.6		ug/L		99	80 - 120
Chloroethane	25.0	19.0		ug/L		76	69 - 136
Chloroform	25.0	22.8		ug/L		91	73 - 127
Chloromethane	25.0	21.0		ug/L		84	68 - 124
cis-1,2-Dichloroethene	25.0	24.7		ug/L		99	74 - 124
cis-1,3-Dichloropropene	25.0	23.3		ug/L		93	74 - 124
Dibromochloromethane	25.0	26.3		ug/L		105	75 - 125
Ethylbenzene	25.0	23.9		ug/L		96	77 - 123
Methylene Chloride	25.0	25.9		ug/L		104	75 - 124
Styrene	25.0	24.5		ug/L		98	80 - 120
Tetrachloroethene	25.0	25.7		ug/L		103	74 - 122
Toluene	25.0	25.1		ug/L		101	80 - 122
trans-1,2-Dichloroethene	25.0	24.5		ug/L		98	73 - 127
trans-1,3-Dichloropropene	25.0	24.0		ug/L		96	80 - 120
Trichloroethene	25.0	23.3		ug/L		93	74 - 123
Vinyl chloride	25.0	19.3		ug/L		77	65 - 133
Xylenes, Total	50.0	49.1		ug/L		98	76 - 122

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	87		77 - 120
4-Bromofluorobenzene (Surr)	98		73 - 120
Dibromofluoromethane (Surr)	96		75 - 123
Toluene-d8 (Surr)	94		80 - 120

Lab Sample ID: 480-201805-4 MS

Matrix: Water

Analysis Batch: 642372

Client Sample ID: WG-11194450-092022-JK-004

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		25.0	27.0		ug/L		108	73 - 126
1,1,2,2-Tetrachloroethane	ND		25.0	27.2		ug/L		109	76 - 120
1,1,2-Trichloroethane	ND		25.0	28.3		ug/L		113	76 - 122
1,1-Dichlorethylene	ND		25.0	31.4		ug/L		126	66 - 127

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# QC Sample Results

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

Job ID: 480-201805-1

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

Lab Sample ID: 480-201805-4 MS

Matrix: Water

Analysis Batch: 642372

Client Sample ID: WG-11194450-092022-JK-004

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
1,1-Dichloroethane	ND		25.0	28.4		ug/L		114	77 - 120
1,2-Dichloroethane	ND		25.0	24.4		ug/L		97	75 - 120
1,2-Dichloroethene, Total	ND		50.0	60.5		ug/L		121	72 - 124
1,2-Dichloropropane	ND		25.0	26.8		ug/L		107	76 - 120
2-Butanone	ND		125	119		ug/L		95	57 - 140
2-Hexanone	ND		125	137		ug/L		109	65 - 127
4-Methyl-2-pentanone	ND		125	136		ug/L		109	71 - 125
Acetone	ND		125	117		ug/L		94	56 - 142
Benzene	ND		25.0	29.0		ug/L		116	71 - 124
Bromodichloromethane	ND		25.0	26.7		ug/L		107	80 - 122
Bromoform	ND		25.0	28.0		ug/L		112	61 - 132
Bromomethane	ND		25.0	23.4		ug/L		93	55 - 144
Carbon disulfide	ND		25.0	31.1		ug/L		124	59 - 134
Carbon tetrachloride	ND		25.0	27.6		ug/L		110	72 - 134
Chlorobenzene	ND		25.0	28.5		ug/L		114	80 - 120
Chloroethane	ND		25.0	19.0		ug/L		76	69 - 136
Chloroform	ND		25.0	27.5		ug/L		110	73 - 127
Chloromethane	ND		25.0	28.4		ug/L		113	68 - 124
cis-1,2-Dichloroethene	ND		25.0	30.2		ug/L		121	74 - 124
cis-1,3-Dichloropropene	ND		25.0	24.1		ug/L		96	74 - 124
Dibromochloromethane	ND		25.0	29.1		ug/L		116	75 - 125
Ethylbenzene	ND		25.0	28.0		ug/L		112	77 - 123
Methylene Chloride	ND		25.0	31.0		ug/L		124	75 - 124
Styrene	ND		25.0	28.3		ug/L		113	80 - 120
Tetrachloroethene	ND		25.0	30.1		ug/L		121	74 - 122
Toluene	ND		25.0	29.5		ug/L		118	80 - 122
trans-1,2-Dichloroethene	ND		25.0	30.3		ug/L		121	73 - 127
trans-1,3-Dichloropropene	ND		25.0	25.5		ug/L		102	80 - 120
Trichloroethene	ND		25.0	27.9		ug/L		112	74 - 123
Vinyl chloride	4.1		25.0	30.7		ug/L		106	65 - 133
Xylenes, Total	ND		50.0	58.0		ug/L		116	76 - 122

Surrogate	MS %Recovery	MS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	89		77 - 120
4-Bromofluorobenzene (Surr)	97		73 - 120
Dibromofluoromethane (Surr)	101		75 - 123
Toluene-d8 (Surr)	96		80 - 120

Lab Sample ID: 480-201805-4 MSD

Matrix: Water

Analysis Batch: 642372

Client Sample ID: WG-11194450-092022-JK-004

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		25.0	27.2		ug/L		109	73 - 126	1	15
1,1,1,2-Tetrachloroethane	ND		25.0	28.0		ug/L		112	76 - 120	3	15
1,1,2-Trichloroethane	ND		25.0	28.9		ug/L		115	76 - 122	2	15
1,1-Dichloroethylene	ND		25.0	30.6		ug/L		122	66 - 127	2	16
1,1-Dichloroethane	ND		25.0	28.0		ug/L		112	77 - 120	1	20

Eurofins Buffalo

# QC Sample Results

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

Job ID: 480-201805-1

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

Lab Sample ID: 480-201805-4 MSD

Client Sample ID: WG-11194450-092022-JK-004

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 642372

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,2-Dichloroethane	ND		25.0	24.5		ug/L		98	75 - 120	0	20
1,2-Dichloroethene, Total	ND		50.0	59.8		ug/L		120	72 - 124	1	20
1,2-Dichloropropane	ND		25.0	27.5		ug/L		110	76 - 120	2	20
2-Butanone	ND		125	127		ug/L		102	57 - 140	6	20
2-Hexanone	ND		125	139		ug/L		111	65 - 127	1	15
4-Methyl-2-pentanone	ND		125	139		ug/L		112	71 - 125	2	35
Acetone	ND		125	121		ug/L		97	56 - 142	4	15
Benzene	ND		25.0	29.0		ug/L		116	71 - 124	0	13
Bromodichloromethane	ND		25.0	27.0		ug/L		108	80 - 122	1	15
Bromoform	ND		25.0	29.1		ug/L		116	61 - 132	4	15
Bromomethane	ND		25.0	23.3		ug/L		93	55 - 144	0	15
Carbon disulfide	ND		25.0	30.6		ug/L		122	59 - 134	2	15
Carbon tetrachloride	ND		25.0	28.0		ug/L		112	72 - 134	1	15
Chlorobenzene	ND		25.0	29.2		ug/L		117	80 - 120	3	25
Chloroethane	ND		25.0	20.5		ug/L		82	69 - 136	8	15
Chloroform	ND		25.0	27.2		ug/L		109	73 - 127	1	20
Chloromethane	ND		25.0	28.7		ug/L		115	68 - 124	1	15
cis-1,2-Dichloroethene	ND		25.0	30.0		ug/L		120	74 - 124	1	15
cis-1,3-Dichloropropene	ND		25.0	25.5		ug/L		102	74 - 124	6	15
Dibromochloromethane	ND		25.0	29.7		ug/L		119	75 - 125	2	15
Ethylbenzene	ND		25.0	28.7		ug/L		115	77 - 123	3	15
Methylene Chloride	ND		25.0	30.8		ug/L		123	75 - 124	1	15
Styrene	ND		25.0	29.6		ug/L		118	80 - 120	5	20
Tetrachloroethene	ND		25.0	30.5		ug/L		122	74 - 122	1	20
Toluene	ND		25.0	30.0		ug/L		120	80 - 122	2	15
trans-1,2-Dichloroethene	ND		25.0	29.8		ug/L		119	73 - 127	2	20
trans-1,3-Dichloropropene	ND		25.0	26.3		ug/L		105	80 - 120	3	15
Trichloroethene	ND		25.0	28.1		ug/L		112	74 - 123	1	16
Vinyl chloride	4.1		25.0	30.9		ug/L		107	65 - 133	1	15
Xylenes, Total	ND		50.0	59.0		ug/L		118	76 - 122	2	16

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	87		77 - 120
4-Bromofluorobenzene (Surr)	100		73 - 120
Dibromofluoromethane (Surr)	97		75 - 123
Toluene-d8 (Surr)	96		80 - 120

Eurofins Buffalo

# QC Association Summary

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

Job ID: 480-201805-1

## GC/MS VOA

### Analysis Batch: 642221

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-201805-1	WG-11194450-092022-KM-001	Total/NA	Water	8260C	
480-201805-2	WG-11194450-092022-JK-002	Total/NA	Water	8260C	
480-201805-3	WG-11194450-092022-JK-003	Total/NA	Water	8260C	
480-201805-5	TB-11194450-092022-KM	Total/NA	Water	8260C	
MB 480-642221/8	Method Blank	Total/NA	Water	8260C	
LCS 480-642221/6	Lab Control Sample	Total/NA	Water	8260C	

### Analysis Batch: 642372

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-201805-2 - DL	WG-11194450-092022-JK-002	Total/NA	Water	8260C	
480-201805-4	WG-11194450-092022-JK-004	Total/NA	Water	8260C	
MB 480-642372/7	Method Blank	Total/NA	Water	8260C	
LCS 480-642372/5	Lab Control Sample	Total/NA	Water	8260C	
480-201805-4 MS	WG-11194450-092022-JK-004	Total/NA	Water	8260C	
480-201805-4 MSD	WG-11194450-092022-JK-004	Total/NA	Water	8260C	

# Lab Chronicle

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

Job ID: 480-201805-1

**Client Sample ID: WG-11194450-092022-KM-001**

**Lab Sample ID: 480-201805-1**

**Date Collected: 09/20/22 11:15**

**Matrix: Water**

**Date Received: 09/20/22 16:00**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260C		1	642221	AXK	EET BUF	09/22/22 04:25

**Client Sample ID: WG-11194450-092022-JK-002**

**Lab Sample ID: 480-201805-2**

**Date Collected: 09/20/22 12:15**

**Matrix: Water**

**Date Received: 09/20/22 16:00**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260C		2	642221	AXK	EET BUF	09/22/22 04:47
Total/NA	Analysis	8260C	DL	10	642372	AXK	EET BUF	09/22/22 18:35

**Client Sample ID: WG-11194450-092022-JK-003**

**Lab Sample ID: 480-201805-3**

**Date Collected: 09/20/22 12:15**

**Matrix: Water**

**Date Received: 09/20/22 16:00**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260C		20	642221	AXK	EET BUF	09/22/22 05:09

**Client Sample ID: WG-11194450-092022-JK-004**

**Lab Sample ID: 480-201805-4**

**Date Collected: 09/20/22 13:15**

**Matrix: Water**

**Date Received: 09/20/22 16:00**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260C		1	642372	AXK	EET BUF	09/22/22 18:57

**Client Sample ID: TB-11194450-092022-KM**

**Lab Sample ID: 480-201805-5**

**Date Collected: 09/20/22 00:00**

**Matrix: Water**

**Date Received: 09/20/22 16:00**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260C		1	642221	AXK	EET BUF	09/22/22 05:53

## Laboratory References:

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

# Accreditation/Certification Summary

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

Job ID: 480-201805-1

## Laboratory: Eurofins 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	03-31-23

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: 480-201805-1

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

### Protocol References:

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

### Laboratory References:

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

# Sample Summary

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

Job ID: 480-201805-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-201805-1	WG-11194450-092022-KM-001	Water	09/20/22 11:15	09/20/22 16:00
480-201805-2	WG-11194450-092022-JK-002	Water	09/20/22 12:15	09/20/22 16:00
480-201805-3	WG-11194450-092022-JK-003	Water	09/20/22 12:15	09/20/22 16:00
480-201805-4	WG-11194450-092022-JK-004	Water	09/20/22 13:15	09/20/22 16:00
480-201805-5	TB-11194450-092022-KM	Water	09/20/22 00:00	09/20/22 16:00



# CHAIN OF CUSTODY RECORD

COC NO.: 58979

**Address:**

PAGE 1 OF 1

**Phone:****Fax:**

Project No/ Phase/Task Code: 11194450-09		Laboratory Name: EuroFins		Lab Location: Amherst NY		SSOW ID:	
Project Name: Graftech GW Sampling		Lab Contact: Denise Heckler				Cooler No:	
Project Location: Nigeria Falls NY				ANALYSIS REQUESTED (See Back of COC for Definitions)		Carrier: Hand Delivered	
GHD Chemistry Contact: Susan Scrocchi		SAMPLE TYPE				Airbill No:	
Sampler(s): K. Miller J. Kaweck		Grab (G) or Comp (C) (see back of COC)		Filtered (Y/N)		Total # of Containers: 20	
SAMPLE IDENTIFICATION (Containers for each sample may be combined on one line)		DATE (mm/dd/yy)		TIME (hh:mm)		MS/MSD Request	
PRESERVATION - (SEE BACK OF COC FOR ABBREVIATIONS)						COMMENTS/ SPECIAL INSTRUCTIONS:	
1 WG-11194450-092022-KM-001		9/20/22		1015		3	
2 WG-11194450-092022-JK-002		9/20/22		1215		3	
3 WG-11194450-092022-JK-003		9/20/22		1215		3	
4 WG-11194450-092022-JK-004		9/20/22		1315		9	
5 TB-11194450-092022-KM		9/20/22				2	
6							
7							
8							
9							
10							
11							
12							

Barcode: 480-201805 Chain of Custody

3.2 #1

TAT Required in business days (use separate COCs for different TATs):  
☐ 1 Day ☐ 2 Days ☐ 3 Days ☐ 1 Week ☐ 2 Week ☐ Other:

Notes/ Special Requirements:

RELINQUISHED BY KM	COMPANY GHD	DATE 9/20/22	TIME 155PM	RECEIVED BY JMK	COMPANY TA	DATE 9/20/22	TIME 1600
1. 9/26/2022							
2.							
3.							

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

## Login Sample Receipt Checklist

Client: GHD Services Inc.

Job Number: 480-201805-1

**Login Number: 201805**

**List Number: 1**

**Creator: Sabuda, Brendan D**

**List Source: Eurofins 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	3.2 #1 ICE
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	
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	True	
Chlorine Residual checked.	True	

# **Attachment D**

## **Data Validation Memo**

# Technical Memorandum

21 October 2022

<b>To</b>	Matthew Porter (GHD)	<b>Tel</b>	248 893 3381
<b>Copy to</b>	Susan Scrocchi	<b>Email</b>	james.abston@ghd.com
<b>From</b>	James Abston/tl/4	<b>Ref. No.</b>	11194450
<b>Subject</b>	<b>Analytical Results and Reduced Validation Annual Groundwater Monitoring Program GrafTech International Holdings, Inc. Niagara Falls, New York September 2022</b>		

## 1. Introduction

This document details a reduced validation of analytical results for groundwater samples collected in support of the Annual Groundwater Program at the Niagara Falls, New York Site in September 2022. Samples were submitted to Eurofins Environmental Testing 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 GHD 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 quality assurance/quality control (QA/QC) samples.

The QA/QC criteria by which these data have been assessed are outlined in the analytical methods referenced in Table 3 and applicable guidance from the document entitled:

1. "USEPA National Functional Guidelines for Superfund Organic Methods Data Review", USEPA 540-R-2016-002, September 2016.

Item 1 will subsequently be 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 Method 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, indicating that laboratory contamination was not a factor for this investigation.

### **4. Surrogate Spike Recoveries - Organic Analyses**

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.

#### **Organic Analyses**

The LCS contained all compounds of interest. All LCS recoveries were within the laboratory control limits, demonstrating acceptable analytical accuracy.

### **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 a known concentration of the analyte of concern and analyzed as MS/MSD samples. The 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 analyses were performed as specified in Table 1.

The MS/MSD samples were spiked with all compounds of interest. All percent recoveries and RPD values were within the laboratory control limits, demonstrating acceptable analytical accuracy and precision.

## 7. Field QA/QC Samples

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

### Trip Blank Sample Analysis

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

### Field Duplicate Sample Analysis

To assess the analytical and sampling protocol precision, one field duplicate sample set was collected and submitted "blind" to the laboratory, as specified in Table 1. The RPDs associated with these duplicate samples 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 criteria is one times the RL value for water samples.

All field duplicate results were within acceptable 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. Positive analyte detections less than the RL but greater than the MDL were reported as estimated (J) in Table 2 unless qualified otherwise in this memorandum. 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.

Regards



**James Abston**  
Project Chemist

Table 1

**Sample Collection and Analysis Summary  
Annual Groundwater Monitoring Program  
GrafTech International Holdings, Inc.  
Niagara Falls, New York  
September 2022**

Sample Identification	Location	Matrix	Collection Date	Collection Time	Analysis/Parameters	Comments
					Volatile Organic Compounds	
			(mm/dd/yyyy)	(hr:min)		
TB-11194450-092022-KM	--	Groundwater Quality Control Matrix	9/20/22	--	X	Trip Blank
WG-11194450-092022-JK-002	BW-4	Groundwater	9/20/22	12:15	X	
WG-11194450-092022-JK-003	BW-4	Groundwater	9/20/22	12:15	X	FD (WG-11194450-092022-JK-002)
WG-11194450-092022-JK-004	BW-3	Groundwater	9/20/22	13:15	X	MS/MSD
WG-11194450-092022-KM-001	GW-8B	Groundwater	9/20/22	11:15	X	

## Notes:

FD - Field Duplicate sample of sample in parenthesis

MS/MSD - Matrix Spike/Matrix Spike Duplicate

-- - Not applicable

Table 2

**Validated Analytical Results**  
**Annual Groundwater Monitoring Program**  
**GrafTech International Holdings, Inc.**  
**Niagara Falls, New York**  
**September 2022**

<b>Location ID:</b>	<b>BW-3</b>	<b>BW-4</b>	<b>BW-4</b>	<b>GW-8B</b>
<b>Sample Name:</b>	WG-11194450-092022-JK-004	WG-11194450-092022-JK-002	WG-11194450-092022-JK-003	WG-11194450-092022-KM-001
<b>Sample Date:</b>	09/20/2022	09/20/2022	09/20/2022 Duplicate	09/20/2022

Parameters	Unit				
<b>Volatile Organic Compounds</b>					
1,1,1-Trichloroethane	µg/L	1.0 U	2.0 U	20 U	1.0 U
1,1,2,2-Tetrachloroethane	µg/L	1.0 U	2.0	20 U	1.0 U
1,1,2-Trichloroethane	µg/L	1.0 U	2.0 U	20 U	1.0 U
1,1-Dichloroethane	µg/L	1.0 U	2.0 U	20 U	1.0 U
1,1-Dichloroethene	µg/L	1.0 U	3.2	20 U	1.0 U
1,2-Dichloroethane	µg/L	1.0 U	2.0 U	20 U	1.0 U
1,2-Dichloroethene (total)	µg/L	2.0 U	720	810	20
1,2-Dichloropropane	µg/L	1.0 U	2.0 U	20 U	1.0 U
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	10 U	20 U	200 U	10 U
2-Hexanone	µg/L	5.0 U	10 U	100 U	5.0 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	5.0 U	10 U	100 U	5.0 U
Acetone	µg/L	10 U	20 U	200 U	10 U
Benzene	µg/L	1.0 U	2.0 U	20 U	1.0 U
Bromodichloromethane	µg/L	1.0 U	2.0 U	20 U	1.0 U
Bromoform	µg/L	1.0 U	2.0 U	20 U	1.0 U
Bromomethane (Methyl bromide)	µg/L	1.0 U	2.0 U	20 U	1.0 U
Carbon disulfide	µg/L	1.0 U	2.0 U	20 U	1.0 U
Carbon tetrachloride	µg/L	1.0 U	2.0 U	20 U	1.0 U
Chlorobenzene	µg/L	1.0 U	2.0 U	20 U	1.0 U
Chloroethane	µg/L	1.0 U	2.0 U	20 U	1.0 U
Chloroform (Trichloromethane)	µg/L	1.0 U	5.1	6.8 J	1.0 U
Chloromethane (Methyl chloride)	µg/L	1.0 U	2.0 U	20 U	0.48 J
cis-1,2-Dichloroethene	µg/L	1.0 U	720	810	20
cis-1,3-Dichloropropene	µg/L	1.0 U	2.0 U	20 U	1.0 U
Dibromochloromethane	µg/L	1.0 U	2.0 U	20 U	1.0 U
Ethylbenzene	µg/L	1.0 U	2.0 U	20 U	1.0 U
Methylene chloride	µg/L	1.0 U	2.0 U	20 U	1.0 U
Styrene	µg/L	1.0 U	2.0 U	20 U	1.0 U
Tetrachloroethene	µg/L	1.0 U	350	370	1.0 U
Toluene	µg/L	1.0 U	2.0 U	20 U	1.0 U
trans-1,2-Dichloroethene	µg/L	1.0 U	10 U	20 U	1.0 U
trans-1,3-Dichloropropene	µg/L	1.0 U	2.0 U	20 U	1.0 U
Trichloroethene	µg/L	1.0 U	440	480	4.3
Vinyl chloride	µg/L	4.1	120	140	4.6
Xylenes (total)	µg/L	2.0 U	4.0 U	40 U	2.0 U

## Notes:

U - Not detected

J - Estimated concentration



**Table 3**

**Analytical Methods  
Annual Groundwater Monitoring Program  
GrafTech International Holdings, Inc.  
Niagara Falls, New York  
September 2022**

<b>Parameter</b>	<b>Method</b>	<b>Matrix</b>	<b>Preservation</b>	<b>Holding Time</b>
				<b>Collection or Extraction to Analysis (Days)</b>
Volatile Organic Compounds (VOCs)	SW-846 8260B	Groundwater	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



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, 2021 to December 31, 2022

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

**Description of Institutional Controls**ParcelOwnerInstitutional 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.

**Description of Engineering Controls**ParcelEngineering 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.

### 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 complete.

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 Ronald C. Brandon at 982 Keynote Circle, Brooklyn Heights, Ohio 44131,  
print name print business address

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

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

 1/27/2023  
Signature of Owner, Remedial Party, or Designated Representative Date  
Rendering Certification

## 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 at 982 Keynote Circle, Brooklyn Heights, Ohio 44131,  
print name print business address

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

Julianne M. Snyder  
Signature of Qualified Environmental Professional, for  
the Owner or Remedial Party, Rendering Certification

N/A  
Stamp  
(Required for PE)

1/27/2023  
Date

## Appendix F

Copies of Weekly General Landfill and Site Security Inspection Reports – 2022



# APPENDIX A - WEEKLY GENERAL LANDFILL AND SITE SECURITY INSPECTION REPORT

Date	Time	Inspector Name
1/8/22	12:00 pm	John S

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)

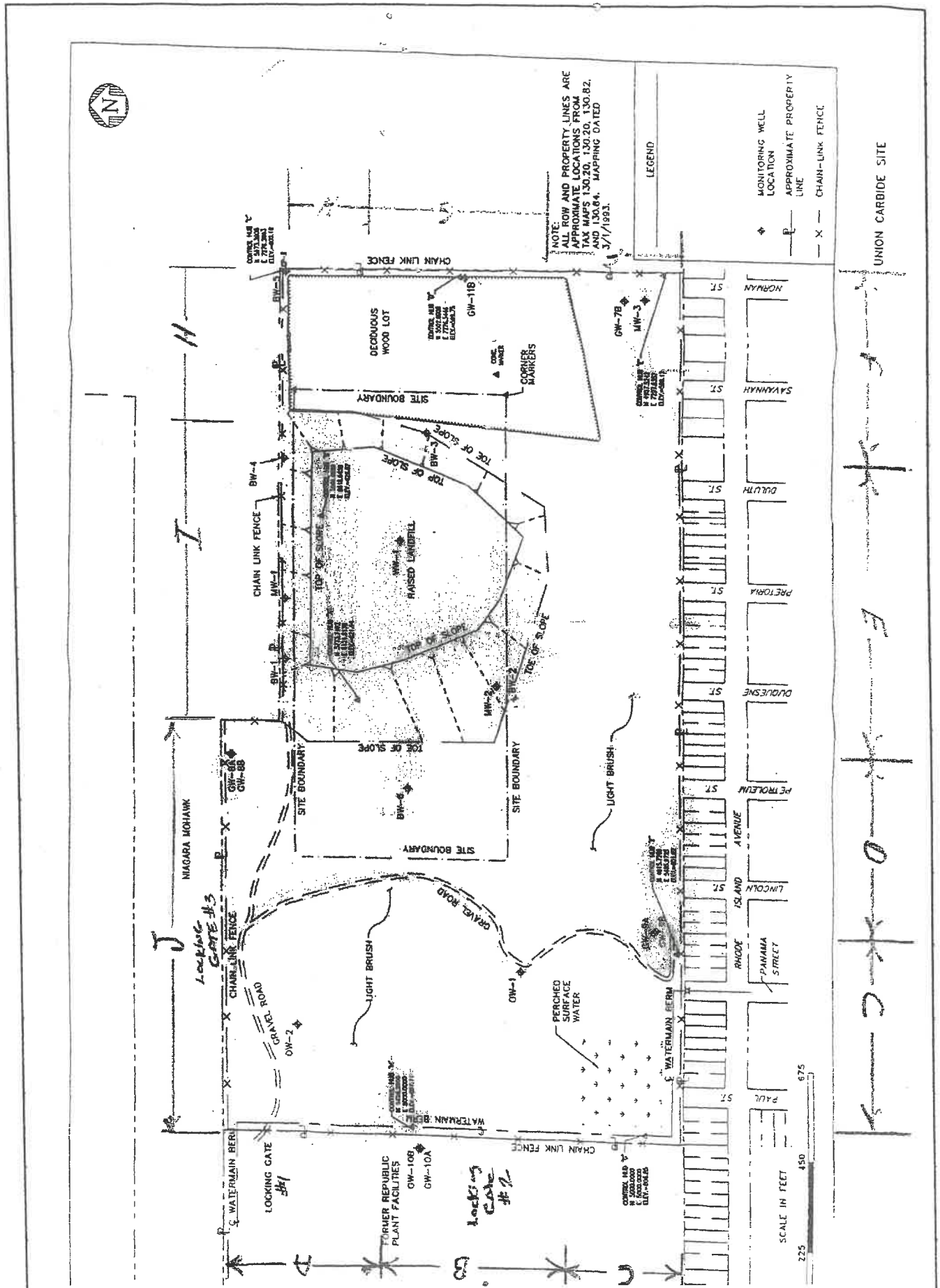
*all good*

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

1/8  
Date



# APPENDIX A - WEEKLY GENERAL LANDFILL AND SITE SECURITY INSPECTION REPORT

Date	Time	Inspector Name
1/15/22	2:00	Dan J...

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)

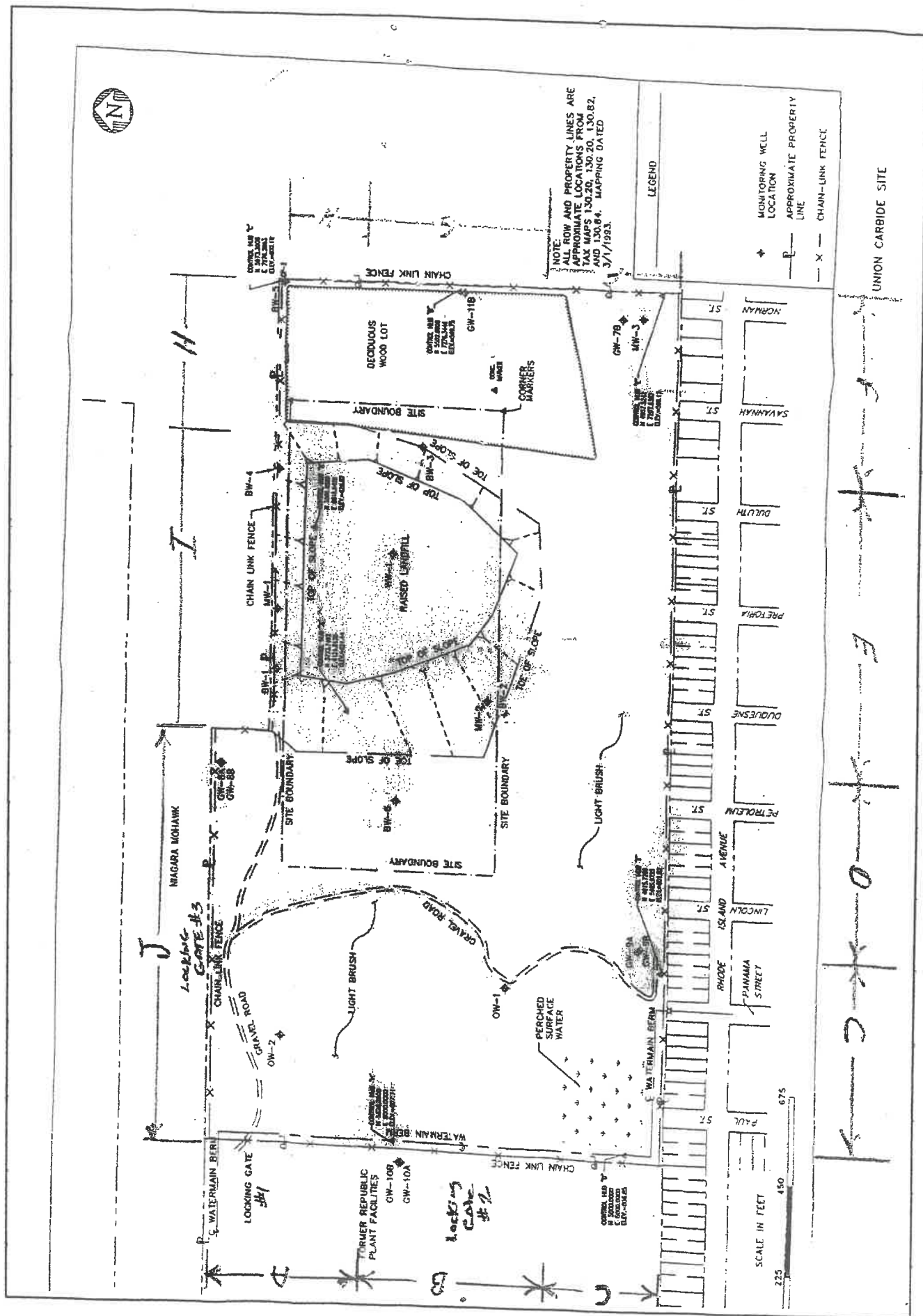
*all good*  
**SURROUNDING AREA COMMENTS:** (Check for condition, damage, signs of security breach)

*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

1/15  
Date



# APPENDIX A - WEEKLY GENERAL LANDFILL AND SITE SECURITY INSPECTION REPORT

Date	Time	Inspector Name
1/22/22	10:00	Erin

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

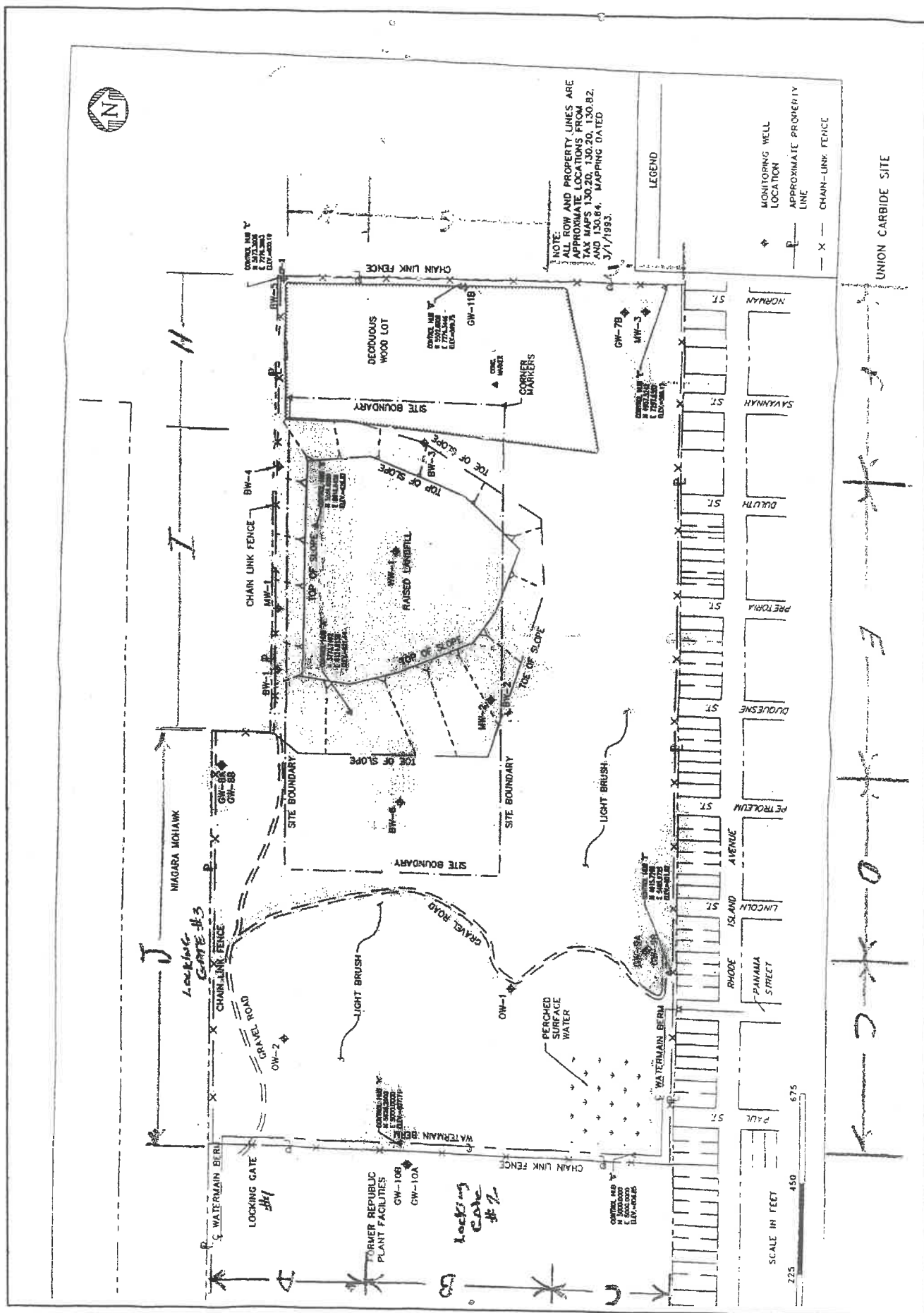
**SURROUNDING AREA COMMENTS:** (Check for condition, damage, signs of security breach)

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.

1/22  
Date





**APPENDIX A - WEEKLY GENERAL LANDFILL AND SITE SECURITY INSPECTION REPORT**

Date	Time	Inspector Name
1/29	11:00	AI

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)

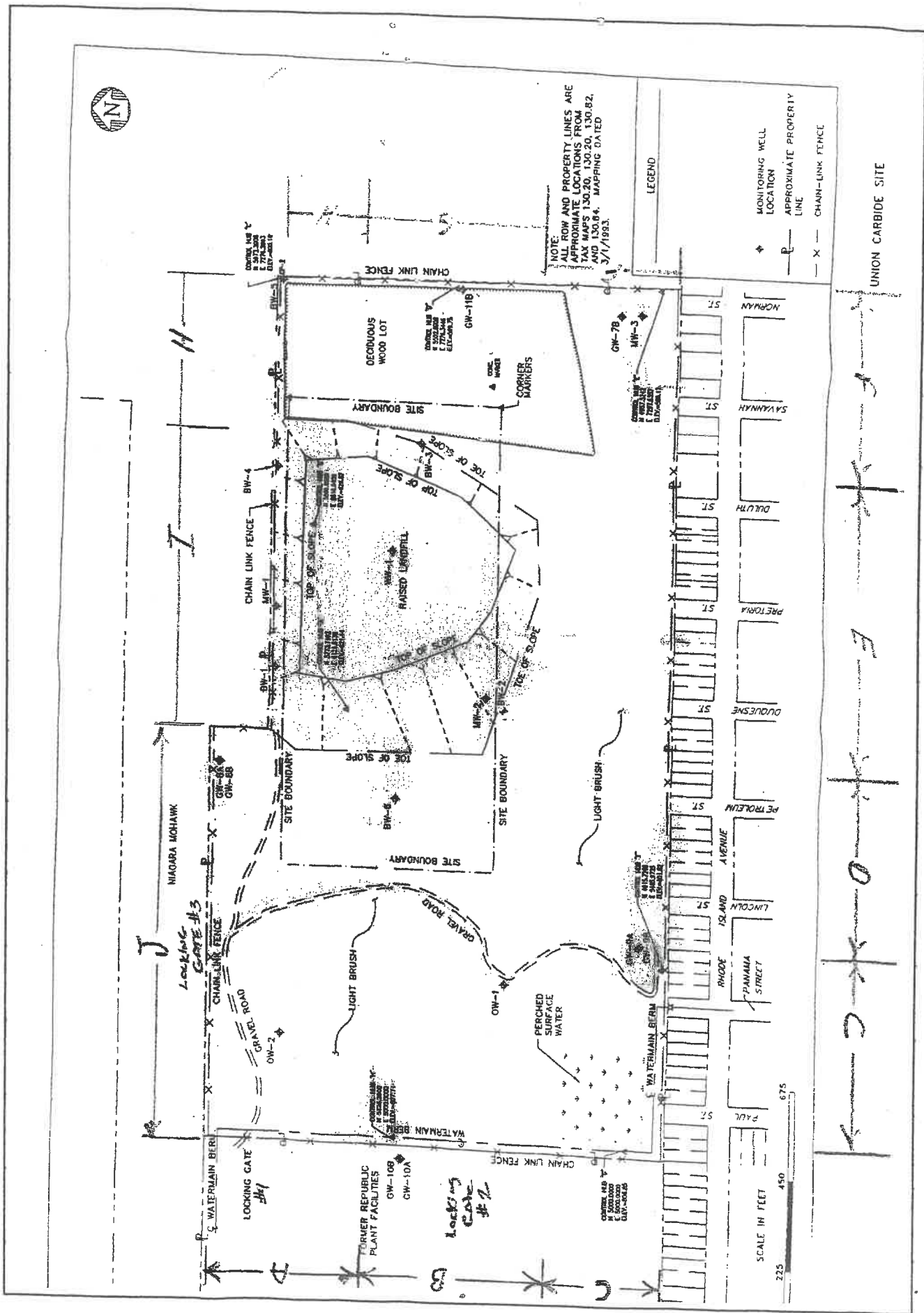
ALL GOOD

**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.**

AI  
Employee

1/29  
Date





# APPENDIX A - WEEKLY GENERAL LANDFILL AND SITE SECURITY INSPECTION REPORT

Date	Time	Inspector Name
2/5/2022	10:00 AM	Jash

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

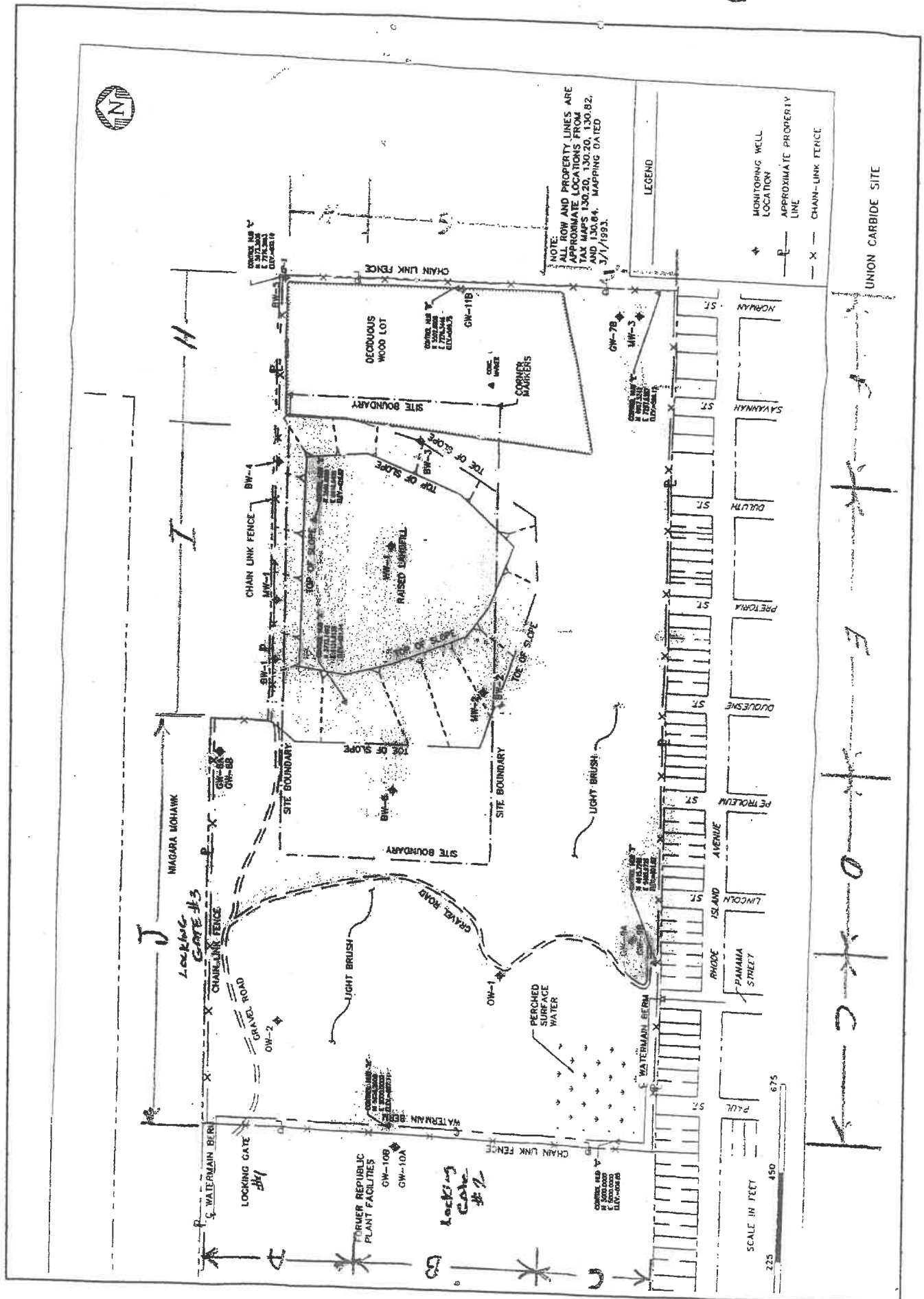
**SURROUNDING AREA COMMENTS:** (Check for condition, damage, signs of security breach)

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.

2/5  
Date



**APPENDIX A - WEEKLY GENERAL LANDFILL AND SITE SECURITY INSPECTION REPORT**

Date	Time	Inspector Name
2/11/22	11am	Ken

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

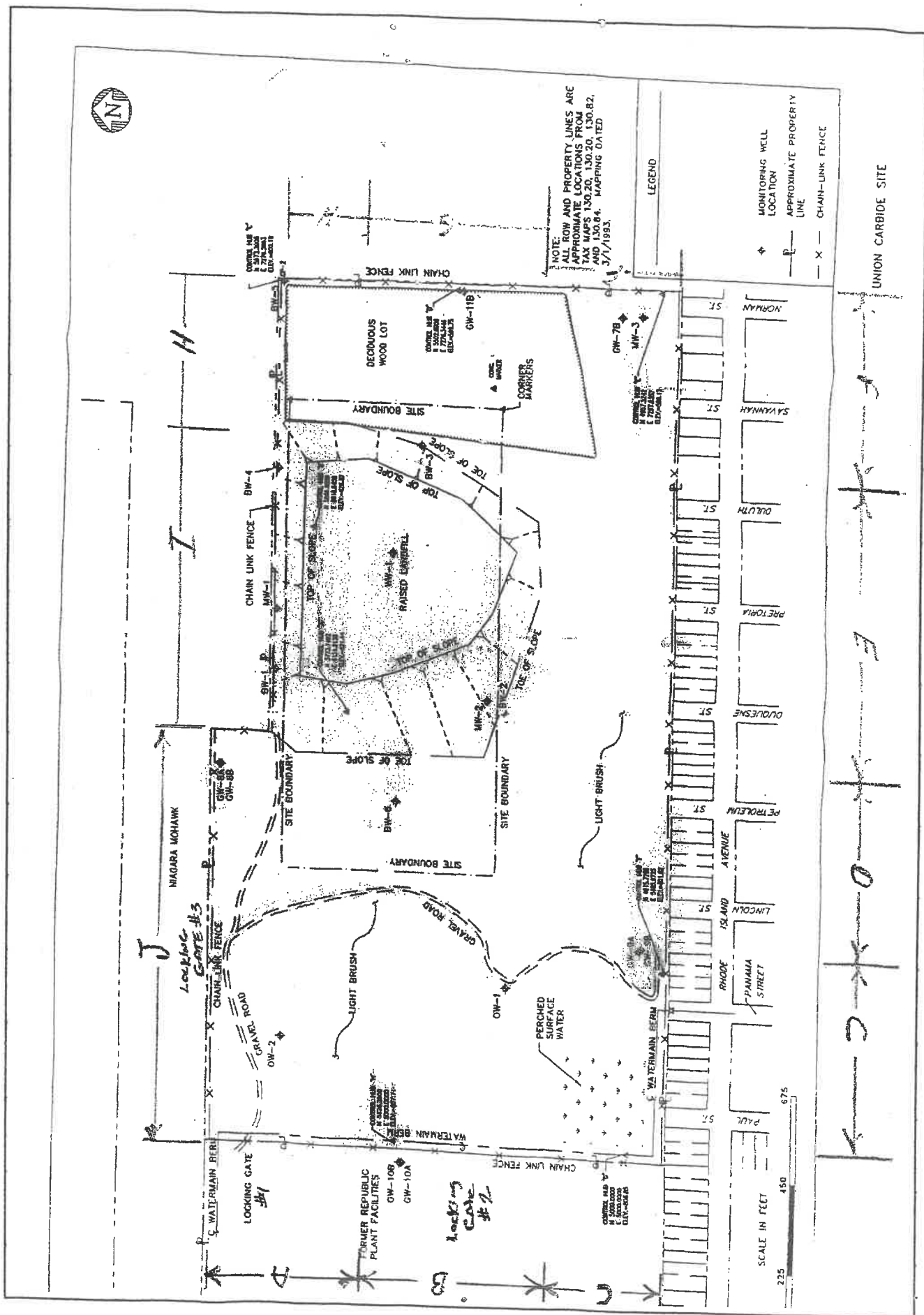
**SURROUNDING AREA COMMENTS:** (Check for condition, damage, signs of security breach)

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.**

2/11  
Date



# APPENDIX A - WEEKLY GENERAL LANDFILL AND SITE SECURITY INSPECTION REPORT

Date	Time	Inspector Name
2/20/2022	12:00	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)

OK - good

**CAP COMMENTS:** (Check for erosion and adequate vegetation)

OK-good

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

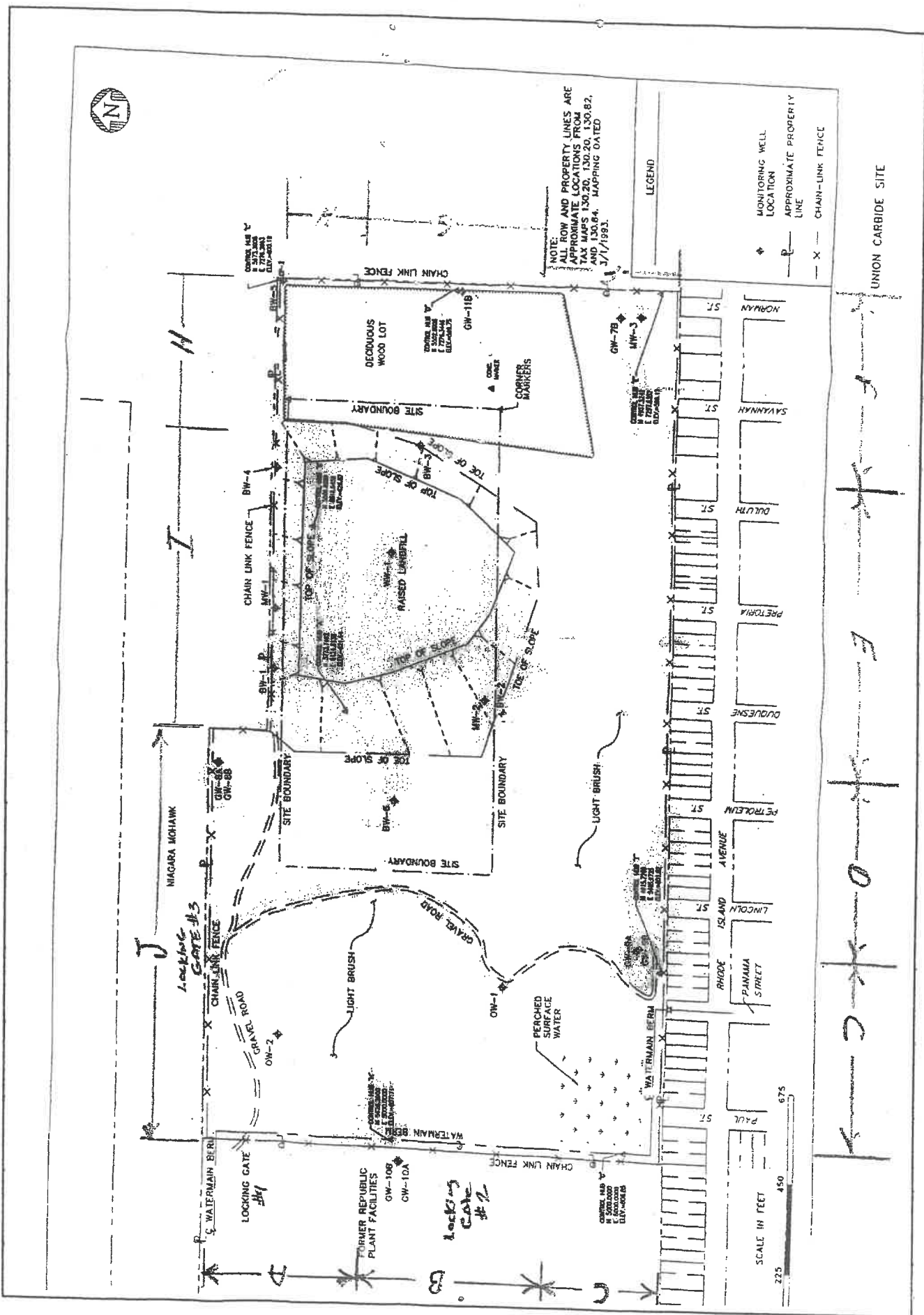
OK-good

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.

Josh  
Employee

2/20  
Date





# APPENDIX A - WEEKLY GENERAL LANDFILL AND SITE SECURITY INSPECTION REPORT

Date	Time	Inspector Name
2/25	10am	Ken

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

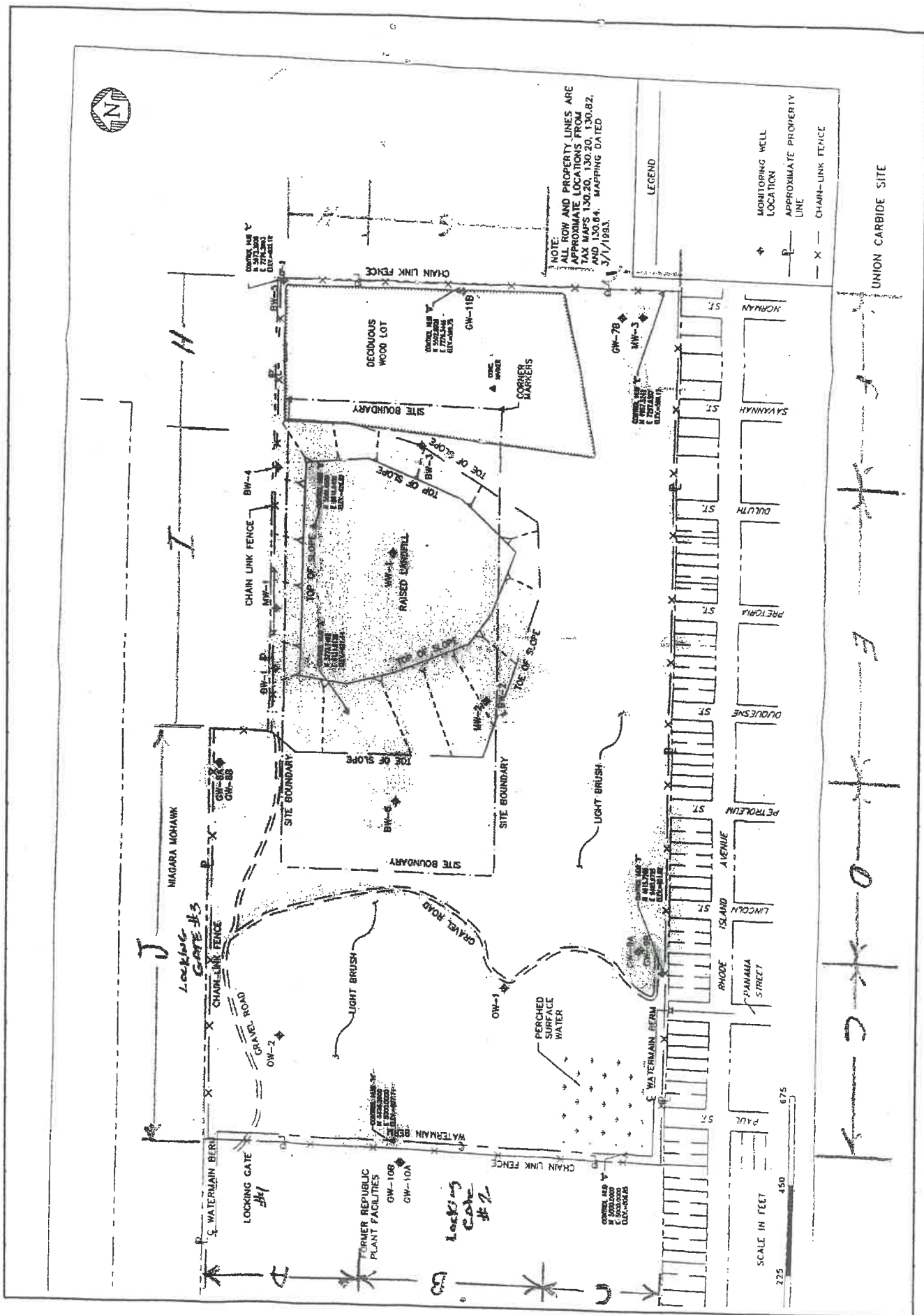
**SURROUNDING AREA COMMENTS:** (Check for condition, damage, signs of security breach)

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.

2/25  
Date





# APPENDIX A - WEEKLY GENERAL LANDFILL AND SITE SECURITY INSPECTION REPORT

Date	Time	Inspector Name
3/5/22	6:00	John Sweatengen

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)

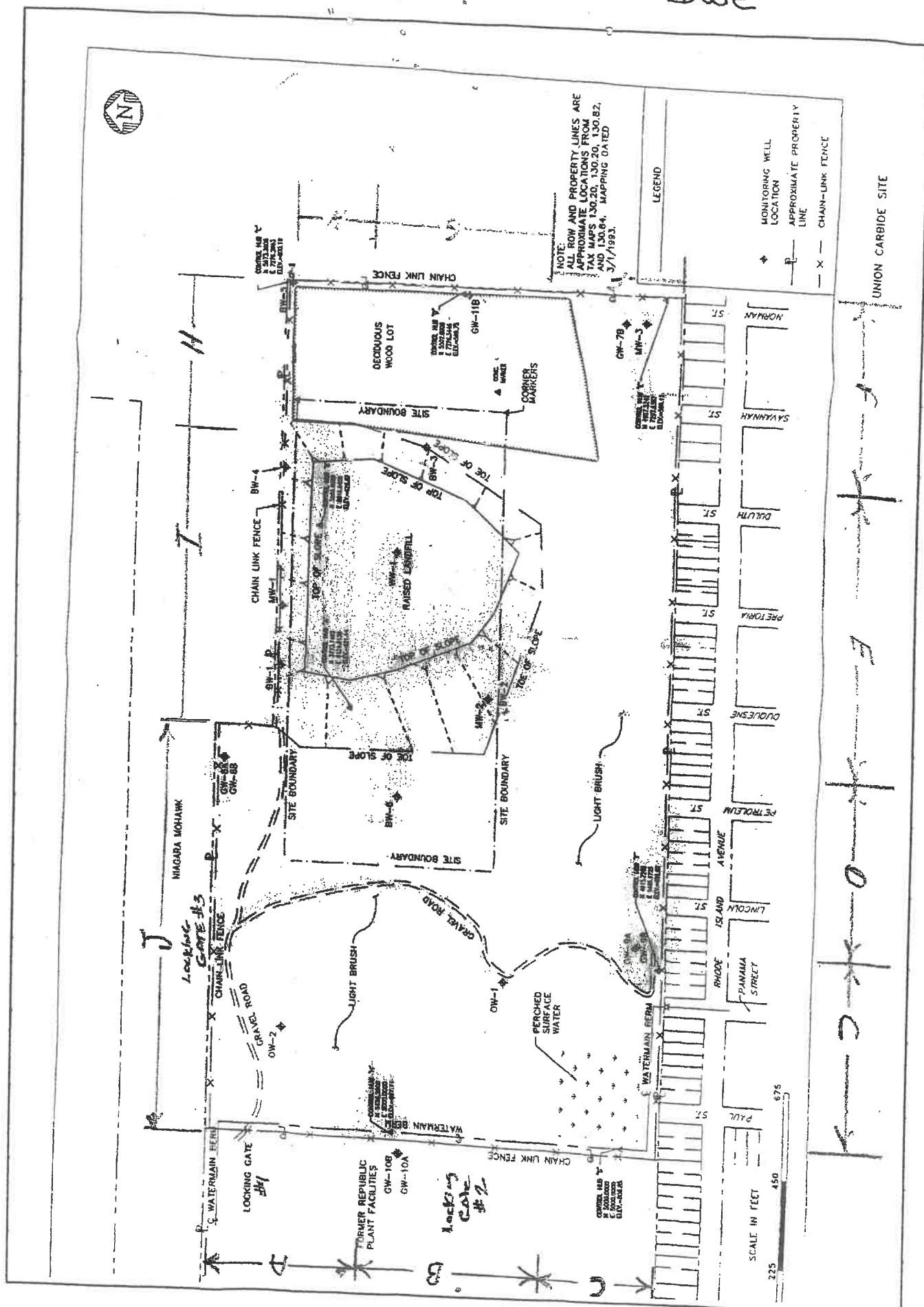
all good

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

3/5/22  
Date



**APPENDIX A - WEEKLY GENERAL LANDFILL AND SITE SECURITY INSPECTION REPORT**

Date	Time	Inspector Name
3/14/22	4:00	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)

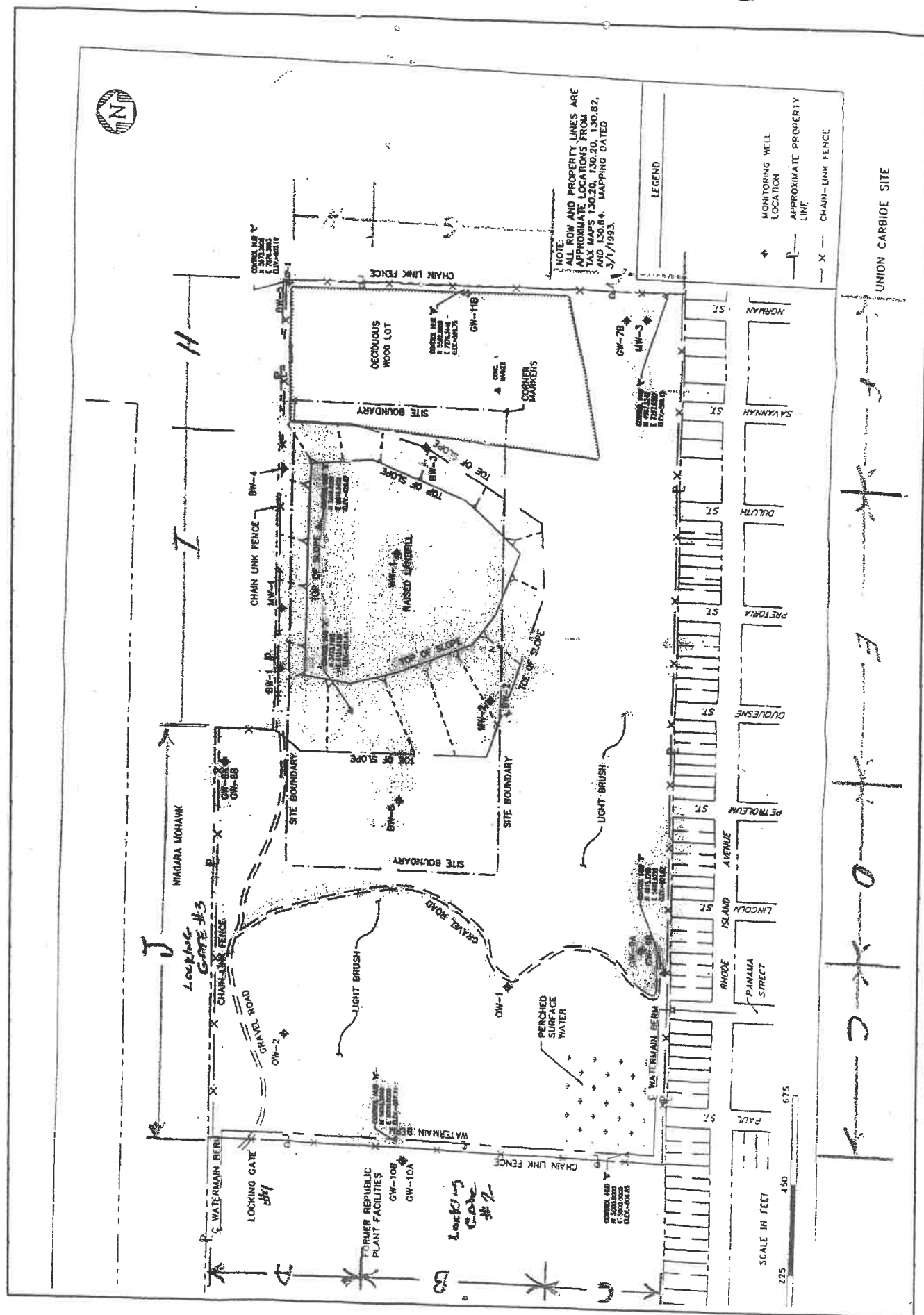
all good

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

3/14/22  
Date



**APPENDIX A - WEEKLY GENERAL LANDFILL AND SITE SECURITY INSPECTION REPORT**

Date	Time	Inspector Name
3/20/22	10 am	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)

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

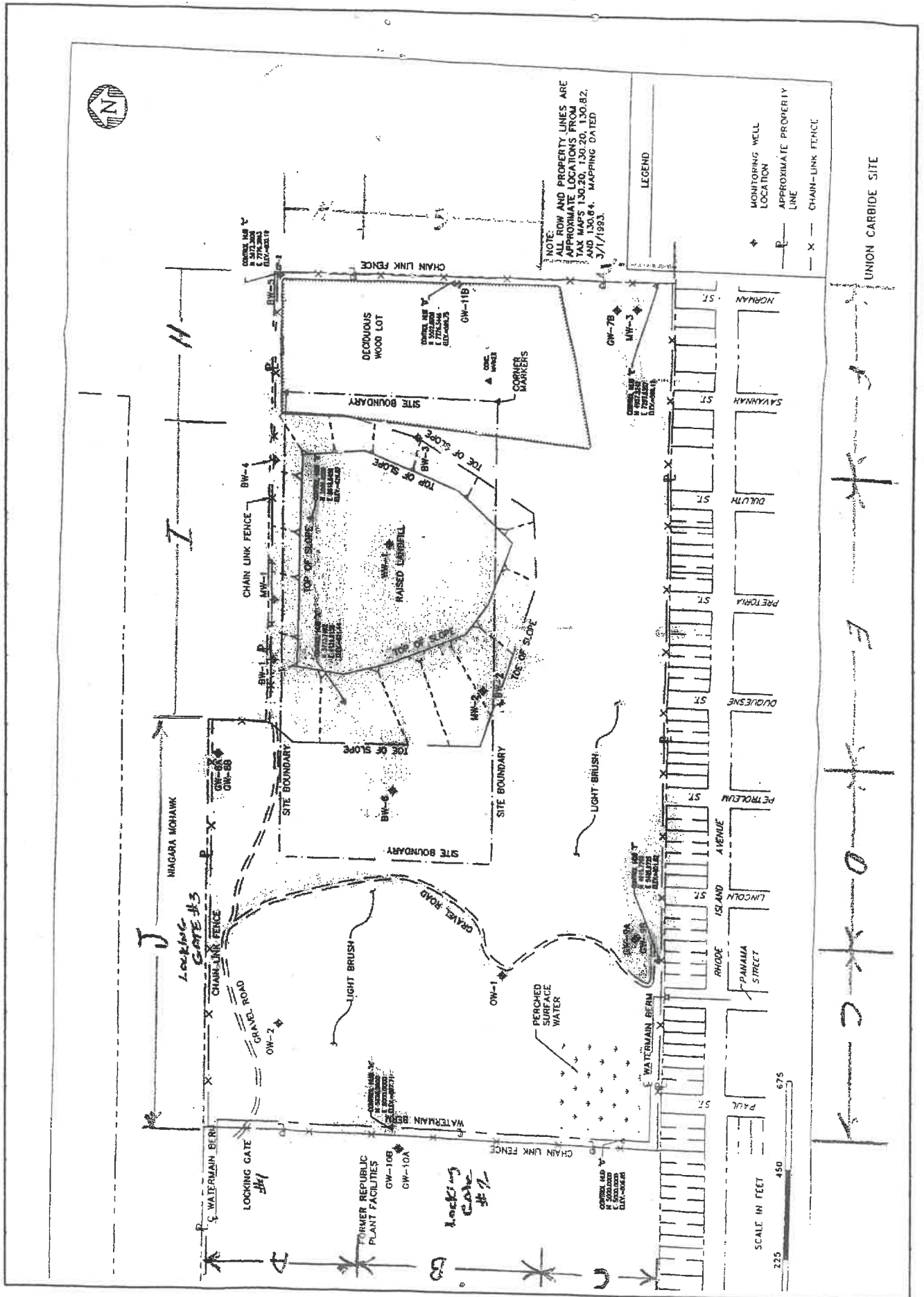
**RECORD THE DATE(S) THAT THE ENTIRE CAP WAS MOWED:** \_\_\_\_\_

**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.**



3/20 - Josh  
Employee

3/20/2022  
Date



# APPENDIX A - WEEKLY GENERAL LANDFILL AND SITE SECURITY INSPECTION REPORT

Date	Time	Inspector Name
3/24/22	12:00 PM	Aaron

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 okay

**CAP COMMENTS:** (Check for erosion and adequate vegetation)

ALL GOOD

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

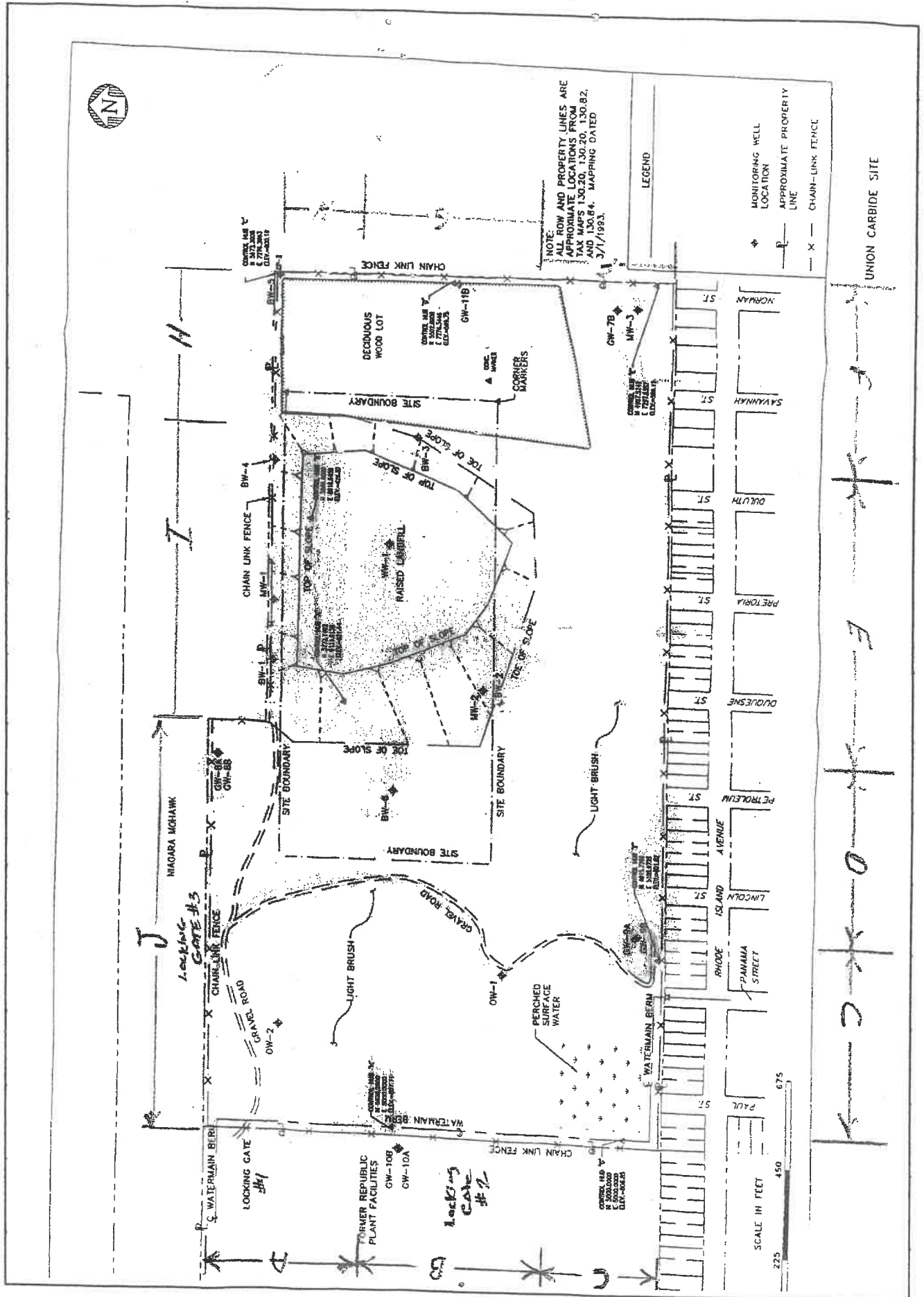
ALL GOOD

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.

Arion  
Employee

3/26/2023  
Date





**APPENDIX A - WEEKLY GENERAL LANDFILL AND SITE SECURITY INSPECTION REPORT**

Date	Time	Inspector Name
4/2	11am	Aaron

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

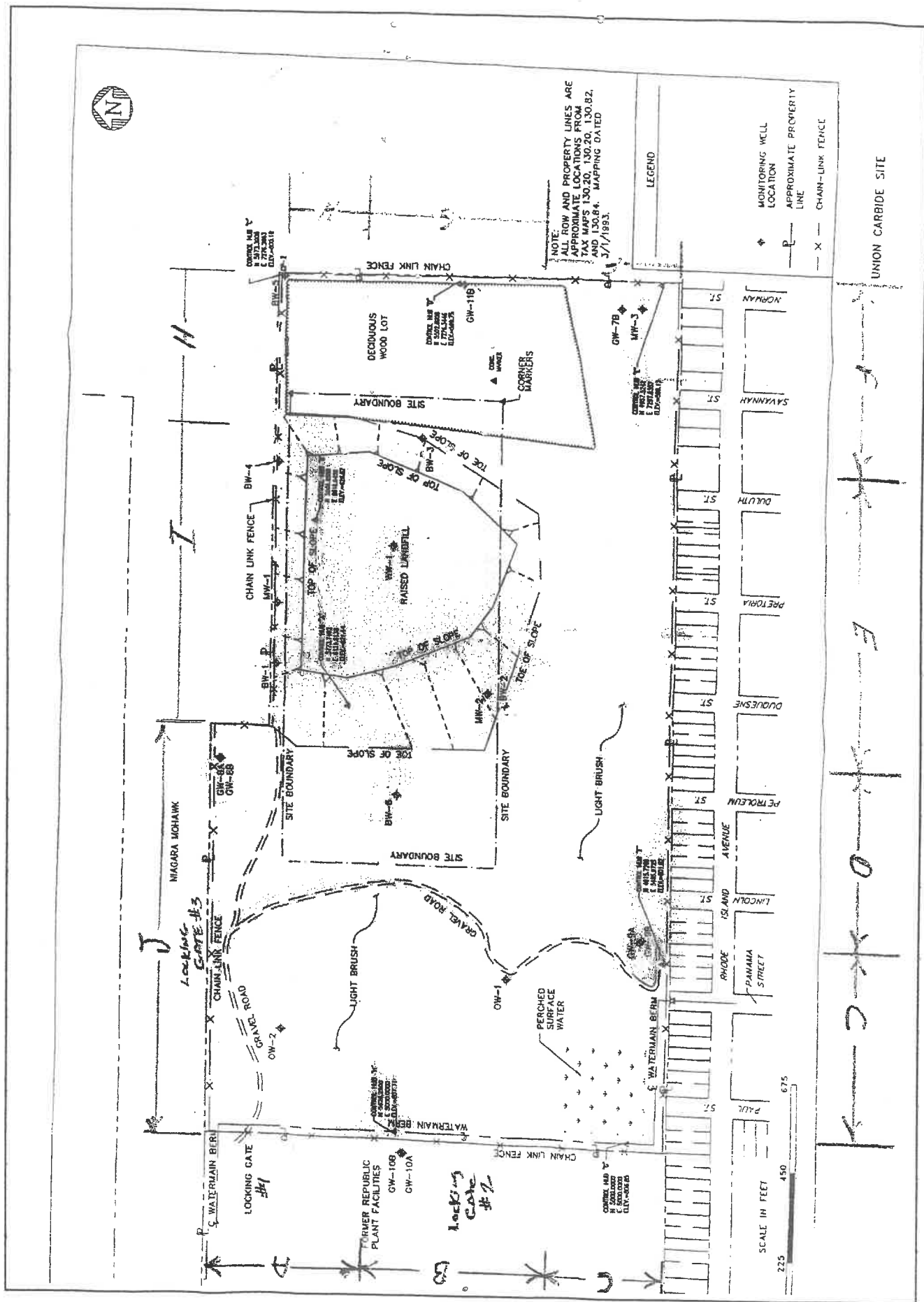
**SURROUNDING AREA COMMENTS:** (Check for condition, damage, signs of security breach)

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 \_\_\_\_\_



**APPENDIX A - WEEKLY GENERAL LANDFILL AND SITE SECURITY INSPECTION REPORT**

Date	Time	Inspector Name
4/10	Josh	J. O'Don

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

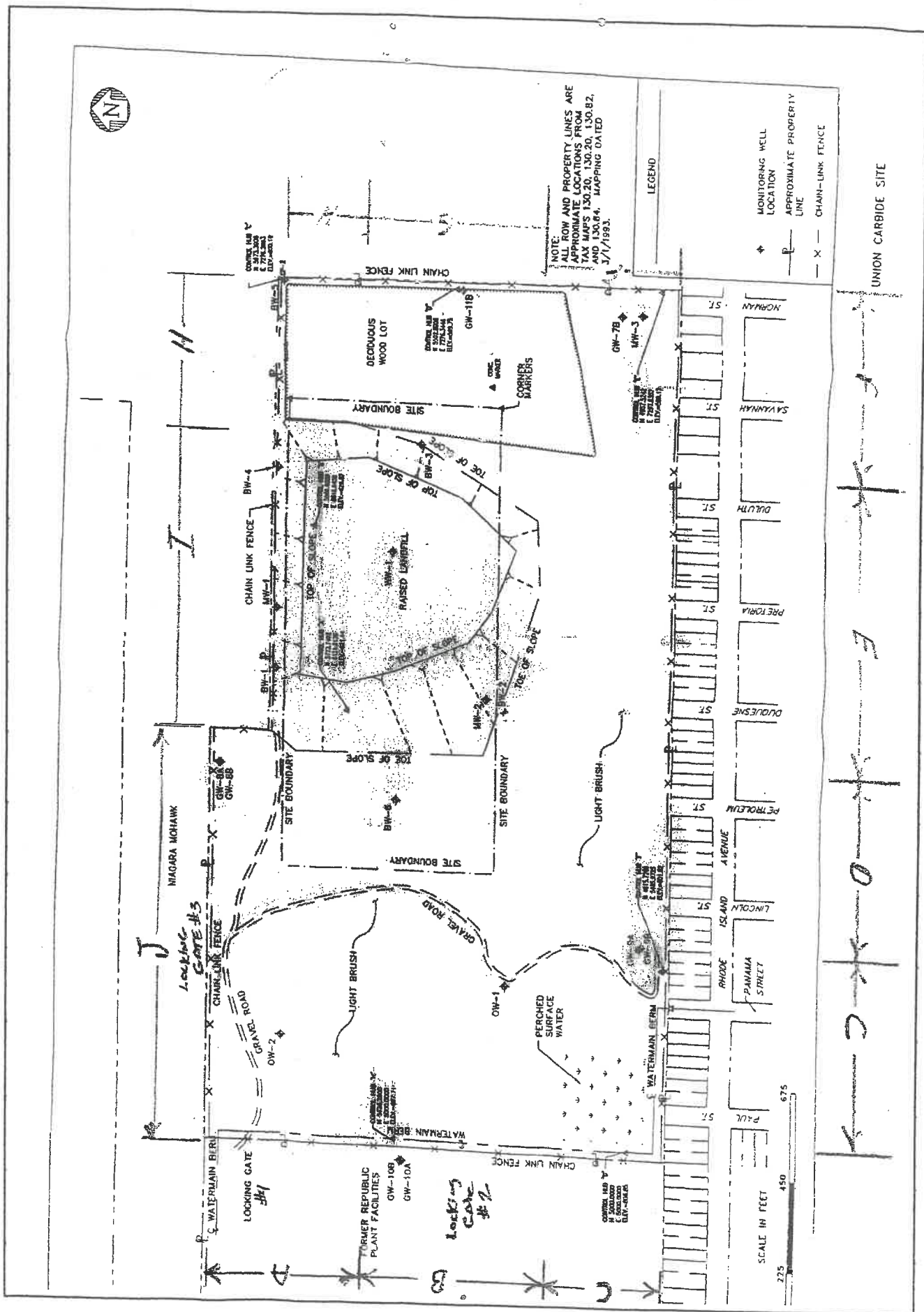
**SURROUNDING AREA COMMENTS:** (Check for condition, damage, signs of security breach)

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.**

4/10  
Date



# APPENDIX A - WEEKLY GENERAL LANDFILL AND SITE SECURITY INSPECTION REPORT

Date	Time	Inspector Name
4/16	Josh	10:00

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

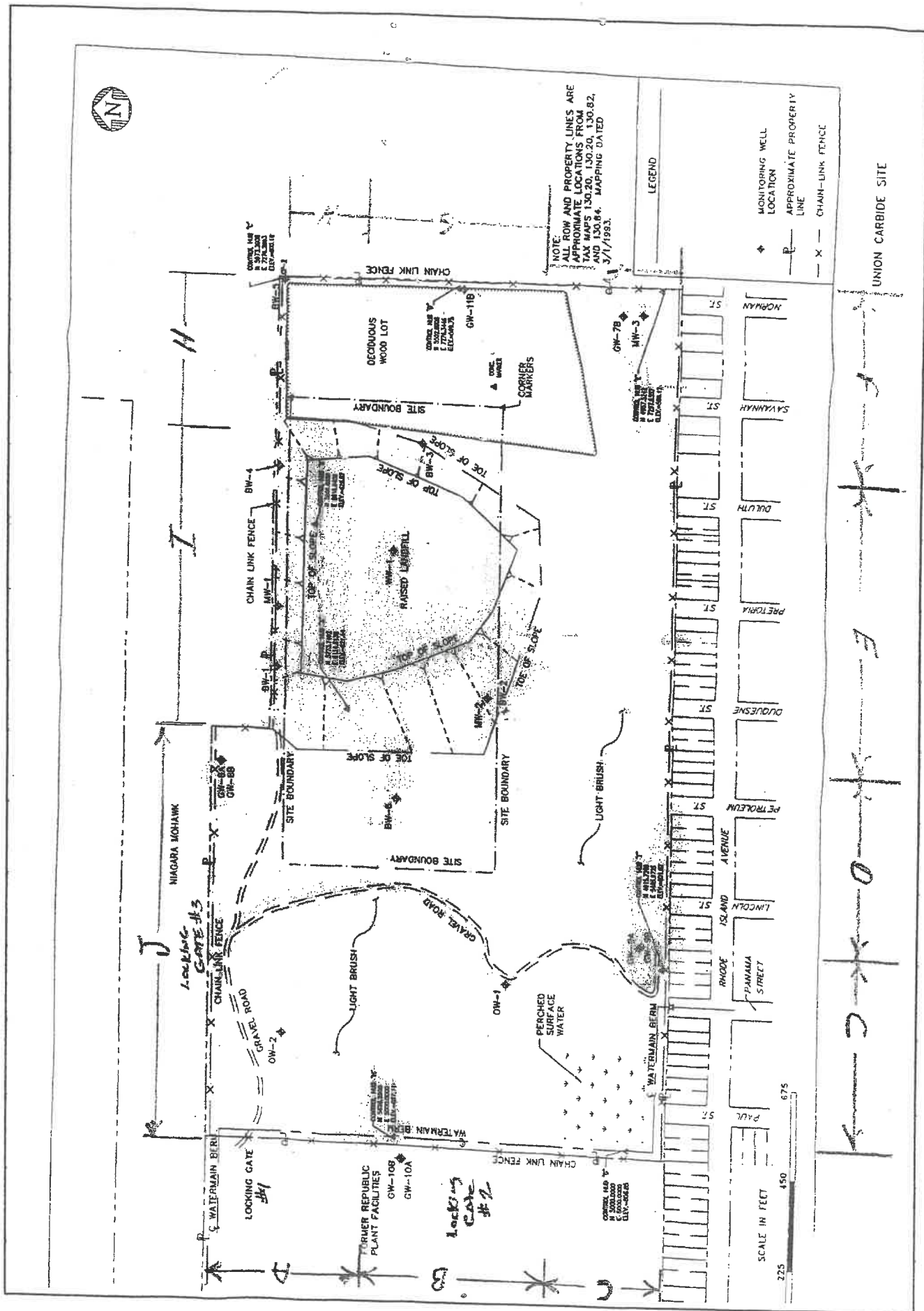
RECORD THE DATE(S) THAT THE ENTIRE CAP WAS MOWED: \_\_\_\_\_

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.



Josh W  
Employee

4/1/80  
Date



# APPENDIX A - WEEKLY GENERAL LANDFILL AND SITE SECURITY INSPECTION REPORT

Date	Time	Inspector Name
4/22/22	3:30 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)

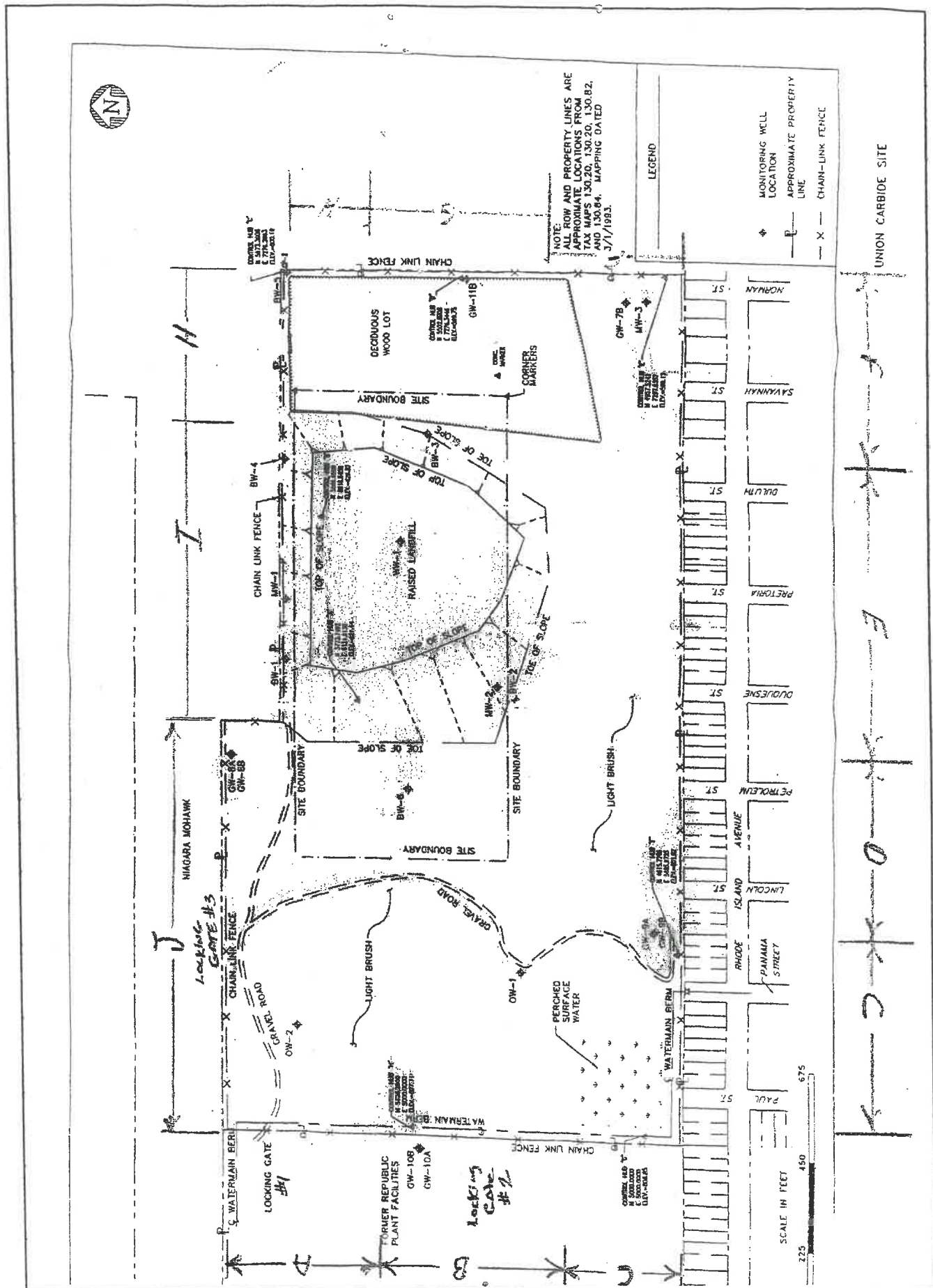
all good

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

4/22  
Date





APPENDIX A - WEEKLY GENERAL LANDFILL AND SITE SECURITY INSPECTION REPORT

Date	Time	Inspector Name
5/1/22	12:00	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

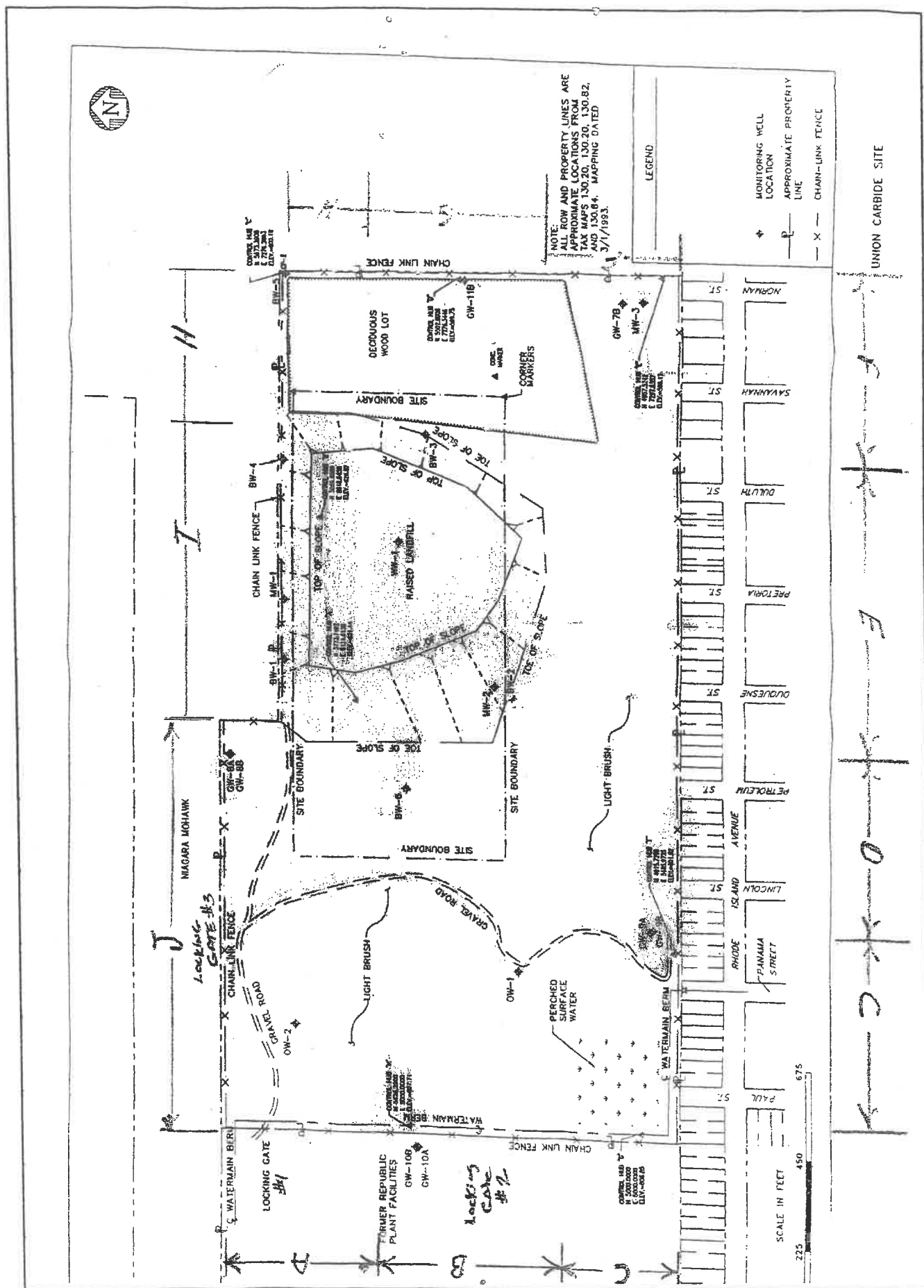
**SURROUNDING AREA COMMENTS:** (Check for condition, damage, signs of security breach)

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.

5/1/22  
Date



# APPENDIX A - WEEKLY GENERAL LANDFILL AND SITE SECURITY INSPECTION REPORT

Date	Time	Inspector Name
5/6/22	1:00	John Swedenborg

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)

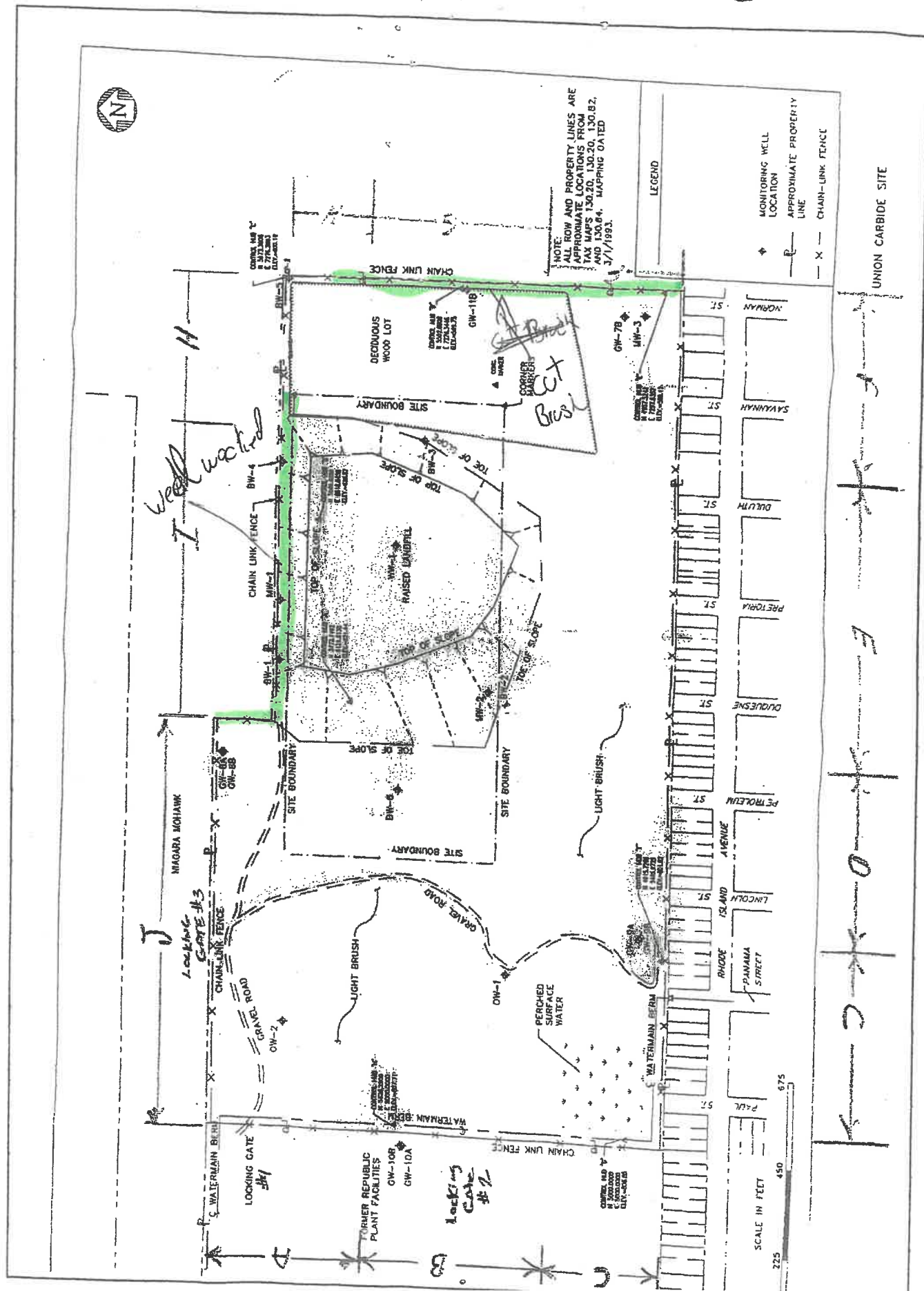
all good

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 Suradegm  
Employee

5/6/22  
Date



# APPENDIX A - WEEKLY GENERAL LANDFILL AND SITE SECURITY INSPECTION REPORT

Date	Time	Inspector Name
5/13/22	12:00	John Szwedong

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

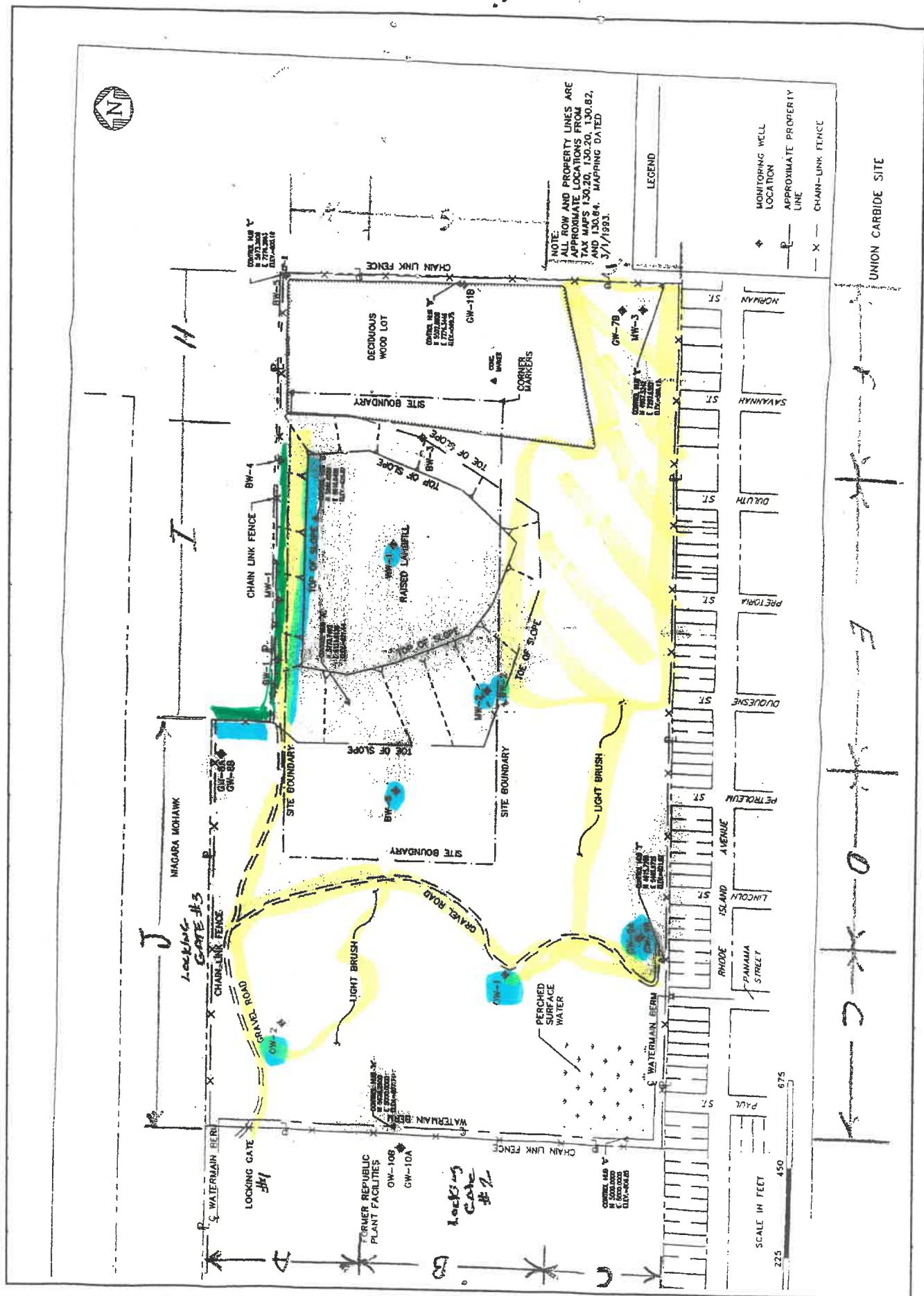
**SURROUNDING AREA COMMENTS:** (Check for condition, damage, signs of security breach)

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.

\$/B/22  
Date





# APPENDIX A - WEEKLY GENERAL LANDFILL AND SITE SECURITY INSPECTION REPORT

Date	Time	Inspector Name
5/29/22	12	John.

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)

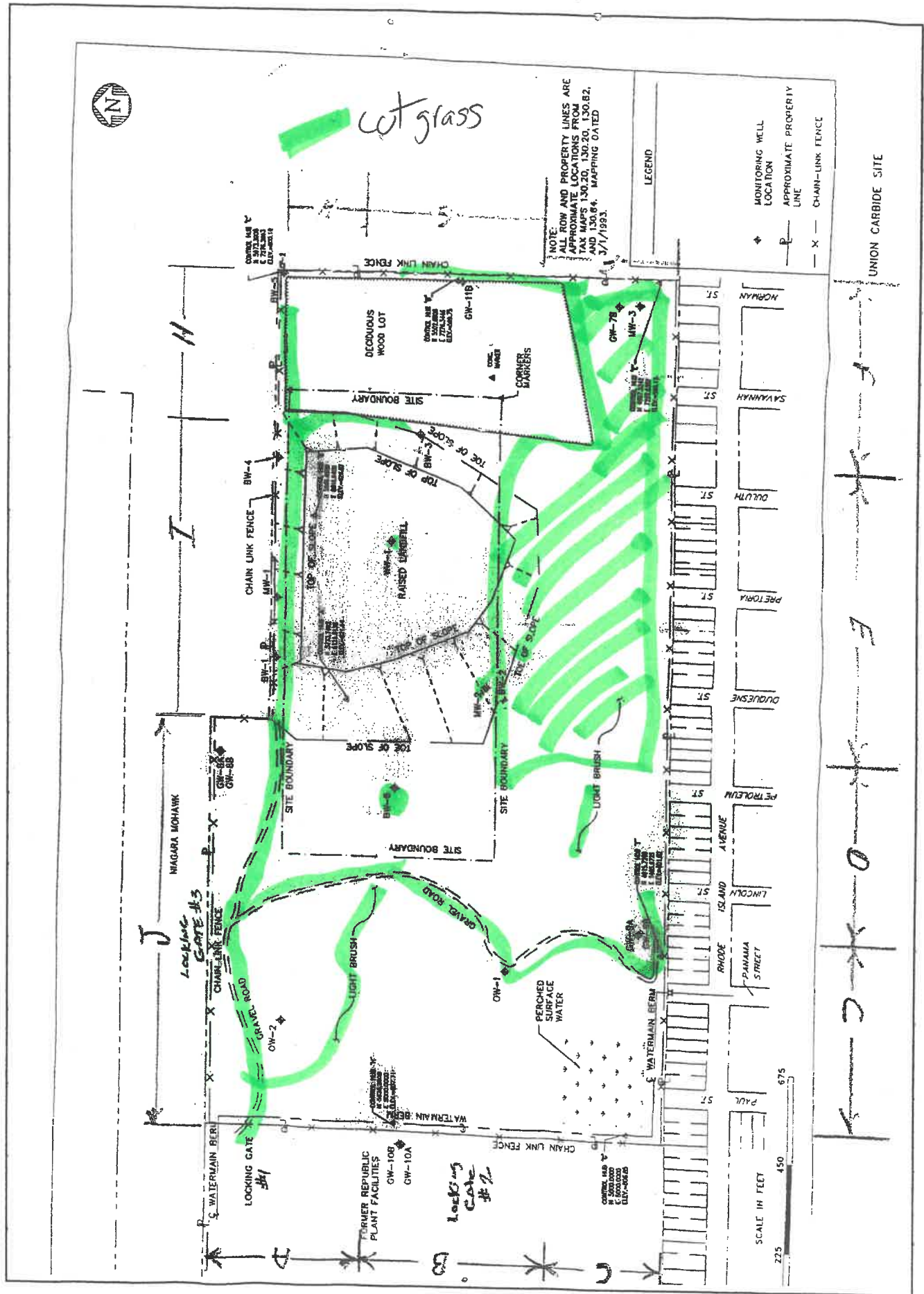
*all good*

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 Savary  
Employee

8/30/22  
Date





**APPENDIX A - WEEKLY GENERAL LANDFILL AND SITE SECURITY INSPECTION REPORT**

Date	Time	Inspector Name
6/3/22	12 pm	John S.

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)

None

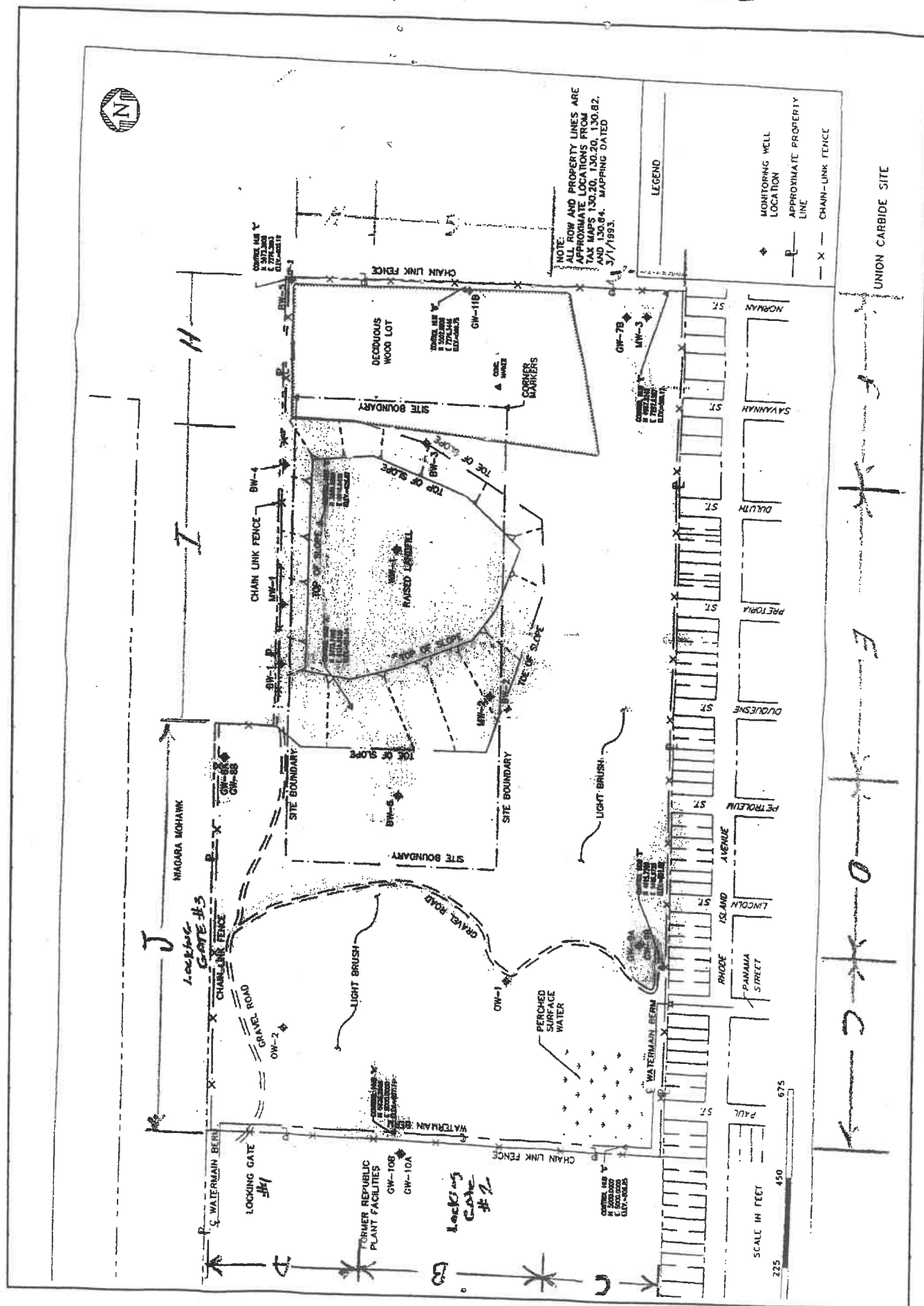
**SURROUNDING AREA COMMENTS:** (Check for condition, damage, signs of security breach)

None

**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.

6/3/22  
Date



**APPENDIX A - WEEKLY GENERAL LANDFILL AND SITE SECURITY INSPECTION REPORT**

Date	Time	Inspector Name
6/10/22	9AM	John S.

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)

None

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

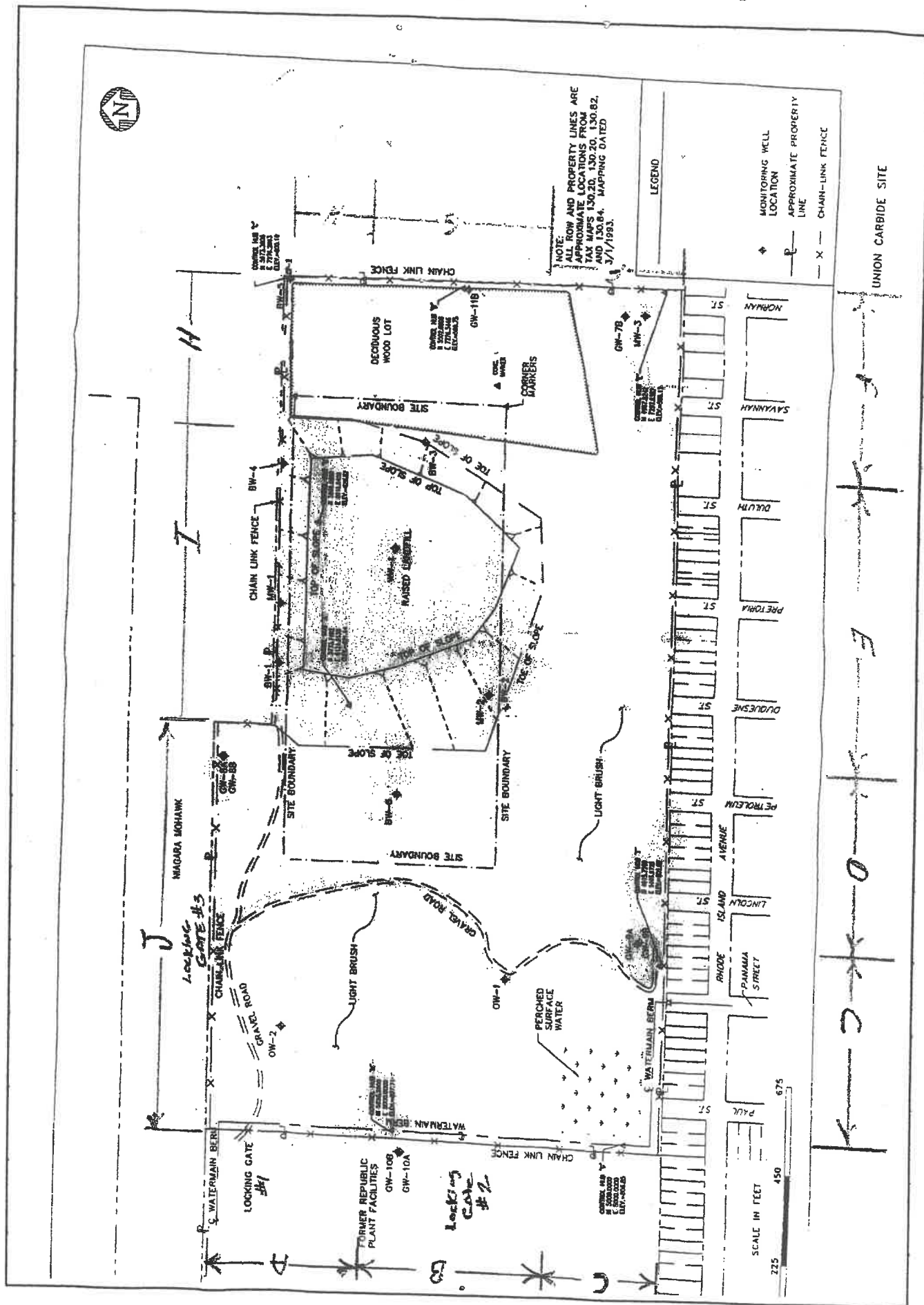
None

**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

6/10/22  
Date



# APPENDIX A - WEEKLY GENERAL LANDFILL AND SITE SECURITY INSPECTION REPORT

Date	Time	Inspector Name
6/17/22	7AM	Charles L.

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)

None

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

None

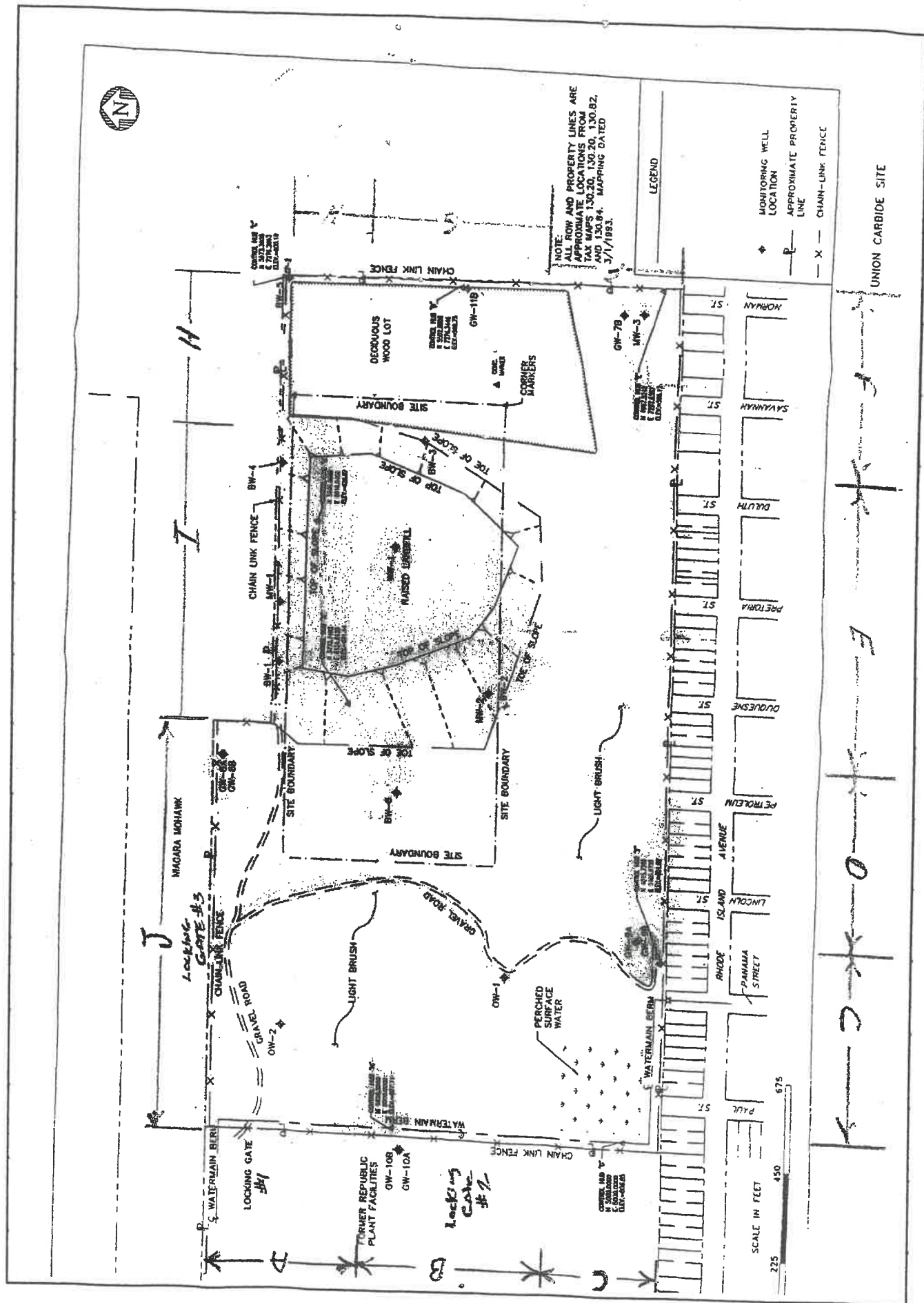
**RECORD THE DATE(S) THAT THE ENTIRE CAP WAS MOWED:** \_\_\_\_\_

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.



Charles L.  
Employee

6/17/22  
Date



# APPENDIX A - WEEKLY GENERAL LANDFILL AND SITE SECURITY INSPECTION REPORT

Date	Time	Inspector Name
6/24/22	7Am	John S.

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)

None

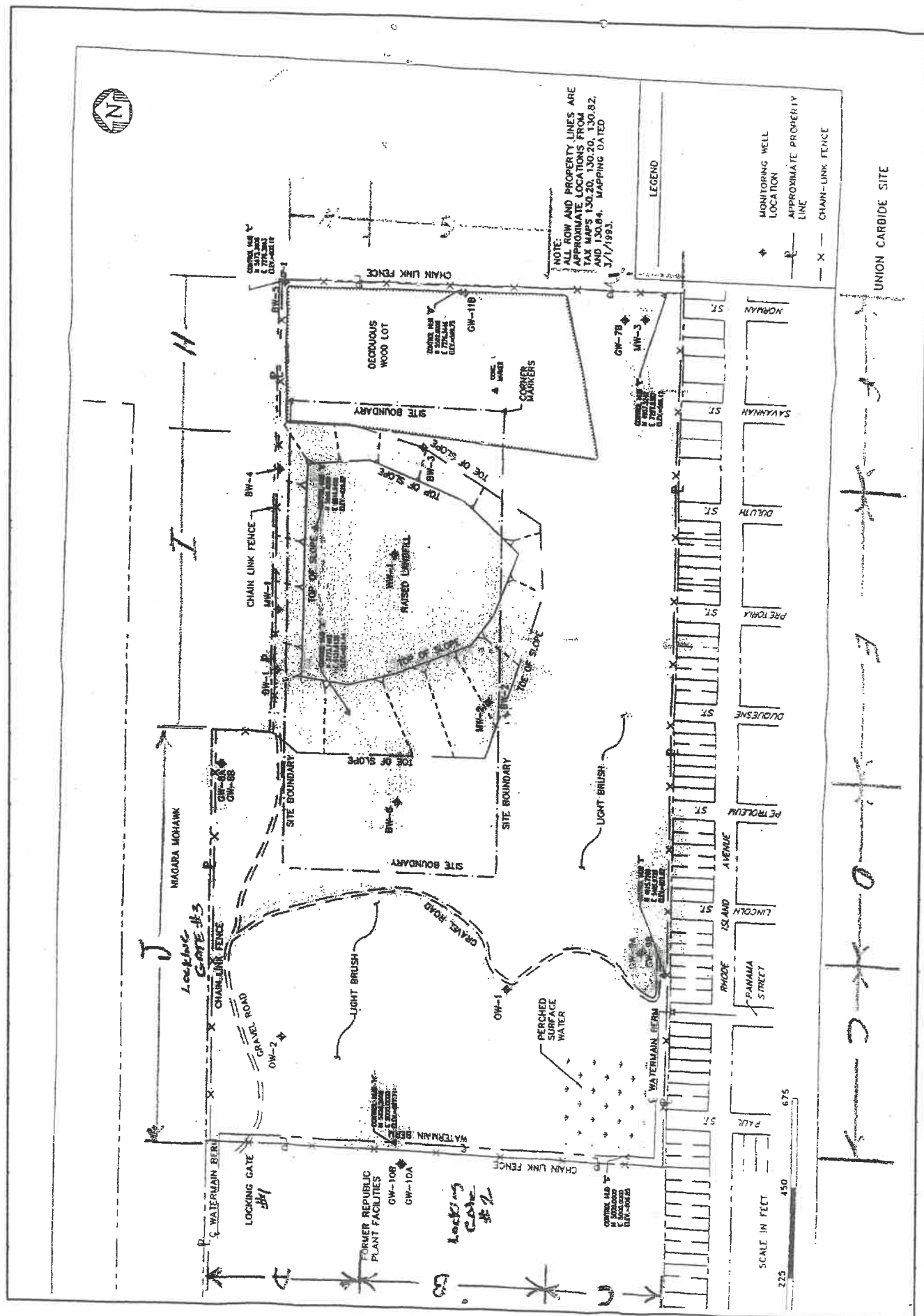
**SURROUNDING AREA COMMENTS:** (Check for condition, damage, signs of security breach)

None

**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.

6/24/22  
Date





# APPENDIX A - WEEKLY GENERAL LANDFILL AND SITE SECURITY INSPECTION REPORT

Date	Time	Inspector Name
7/1/22	12pm	John S.

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)

None

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

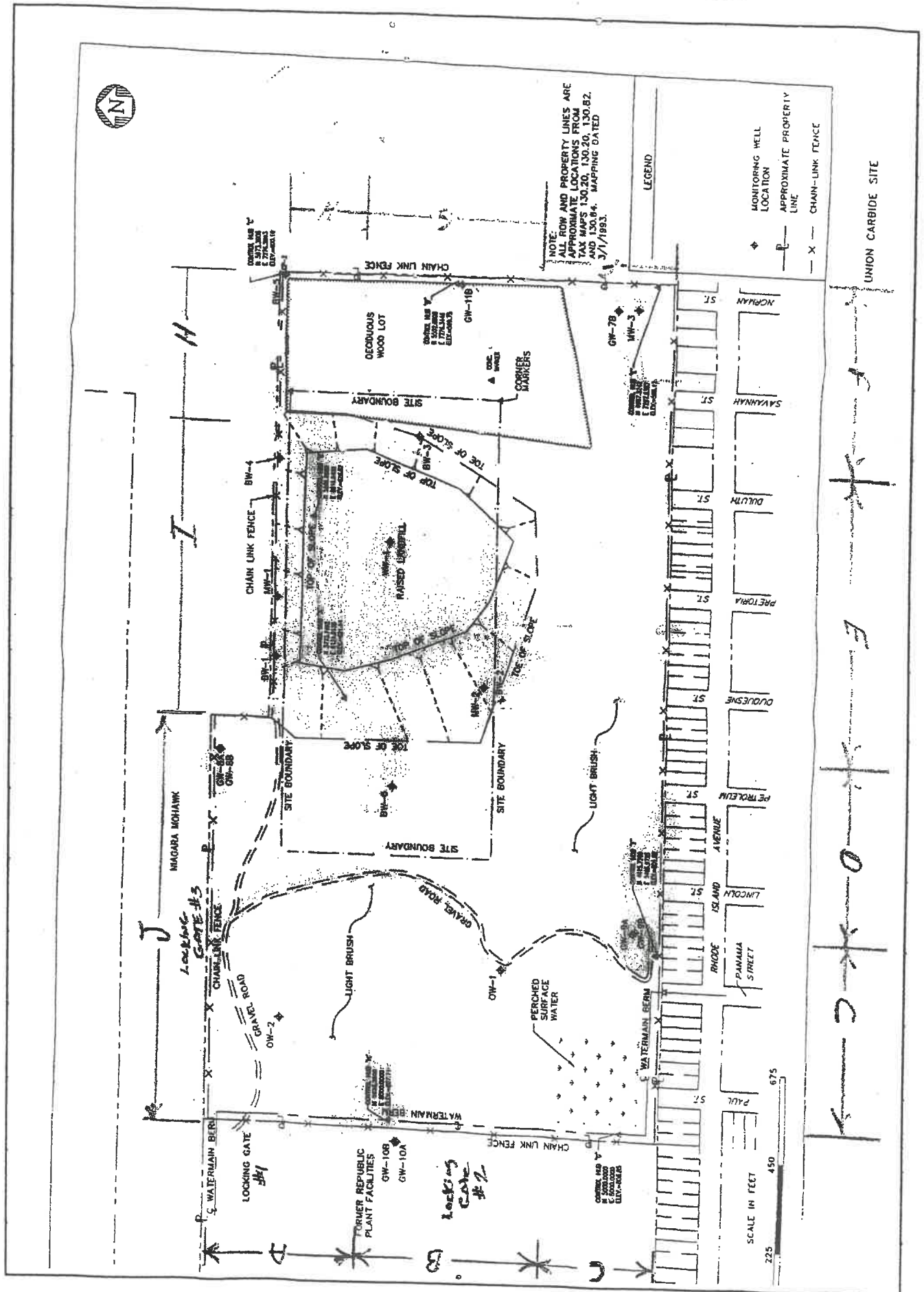
None

**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

7/1/22  
Date



# APPENDIX A - WEEKLY GENERAL LANDFILL AND SITE SECURITY INSPECTION REPORT

Date	Time	Inspector Name
7/8/22	1pm	Samuel

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)

None

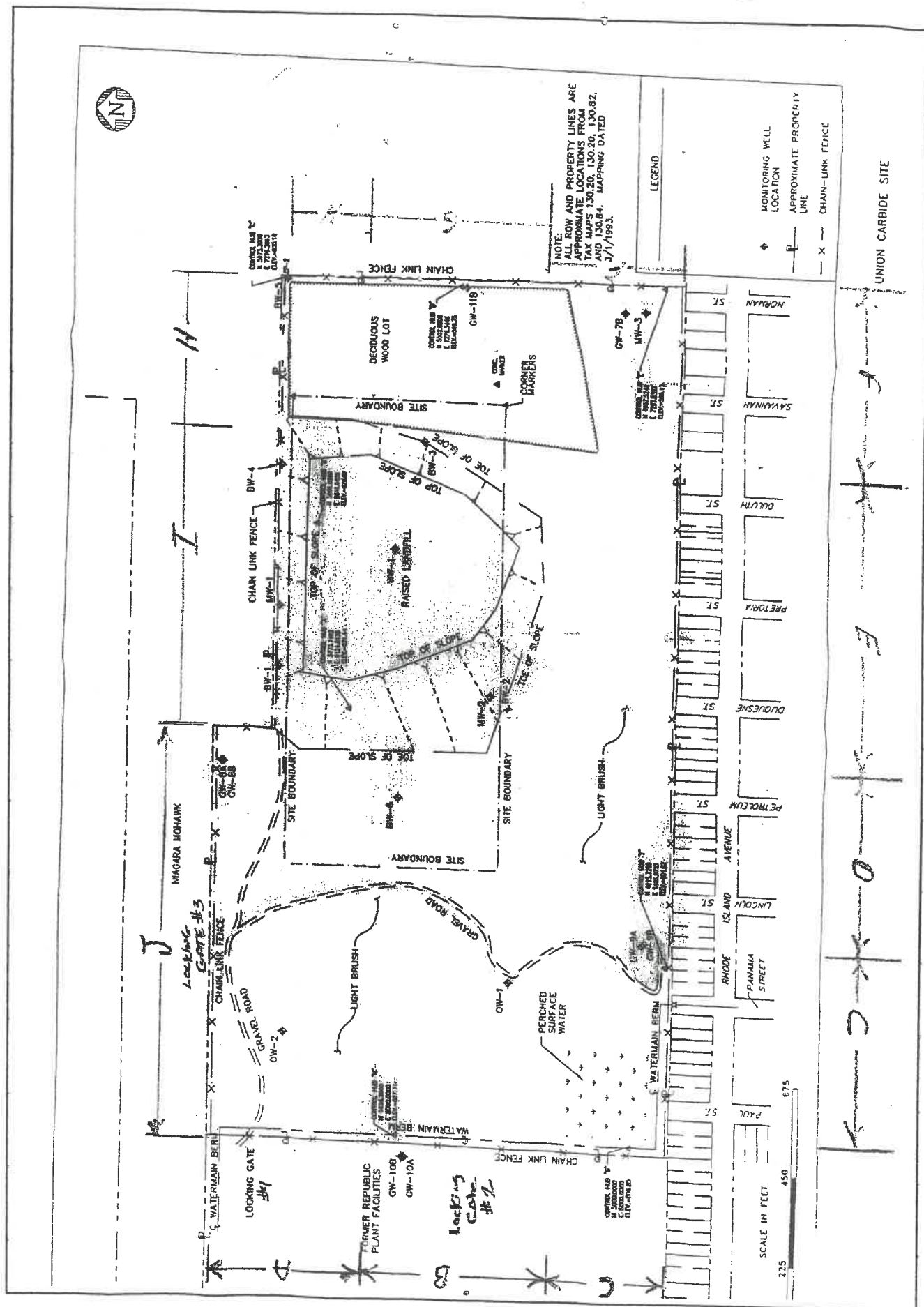
**SURROUNDING AREA COMMENTS:** (Check for condition, damage, signs of security breach)

None

**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.

7/8/22  
Date



**APPENDIX A - WEEKLY GENERAL LANDFILL AND SITE SECURITY INSPECTION REPORT**

Date	Time	Inspector Name
7/15/22	7AM	John S.

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)

None

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

None

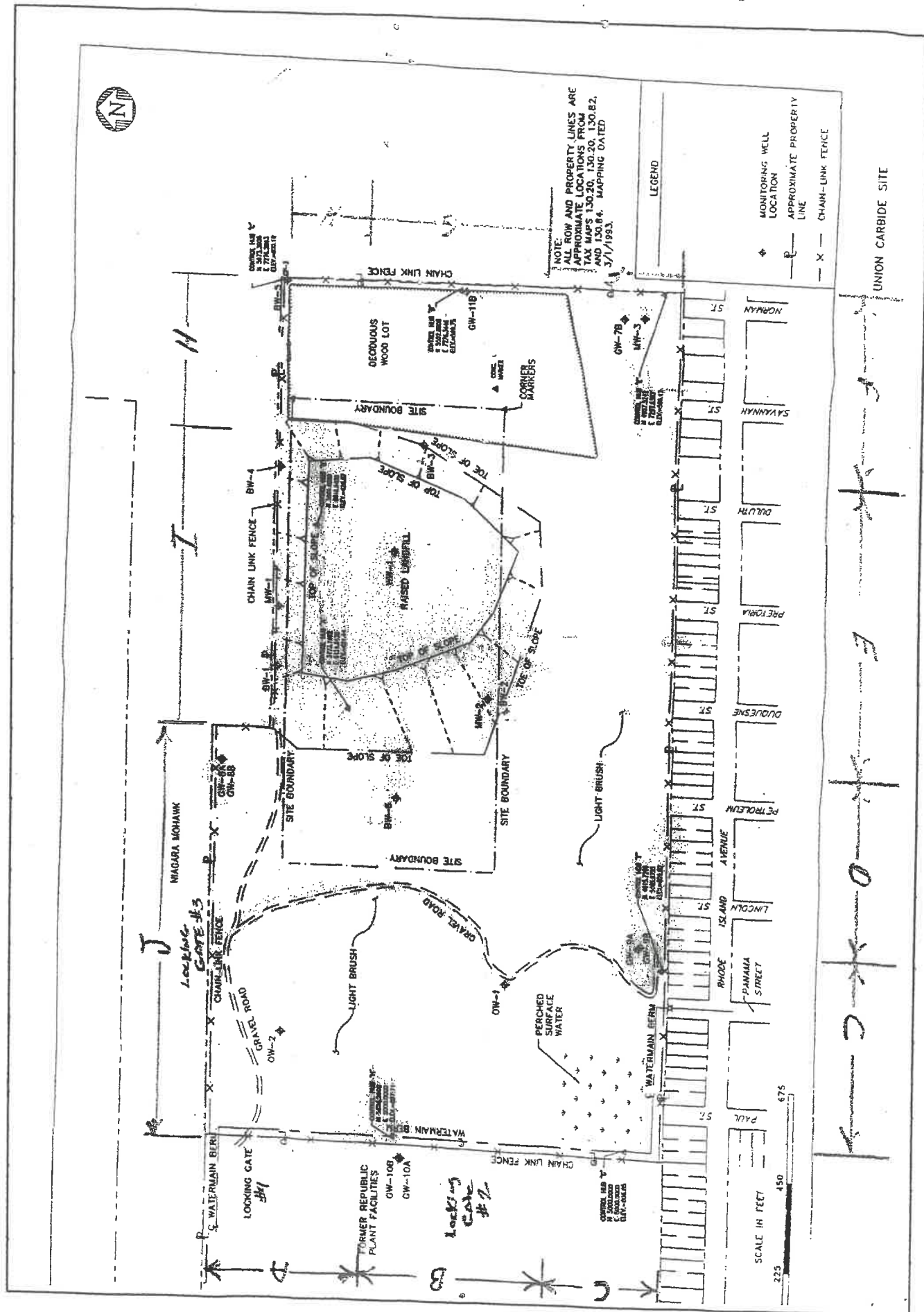
**RECORD THE DATE(S) THAT THE ENTIRE CAP WAS MOWED:** \_\_\_\_\_

**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

7/15/20  
Date



# APPENDIX A - WEEKLY GENERAL LANDFILL AND SITE SECURITY INSPECTION REPORT

Date	Time	Inspector Name
7/22/22	7AM	John S.

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)

None

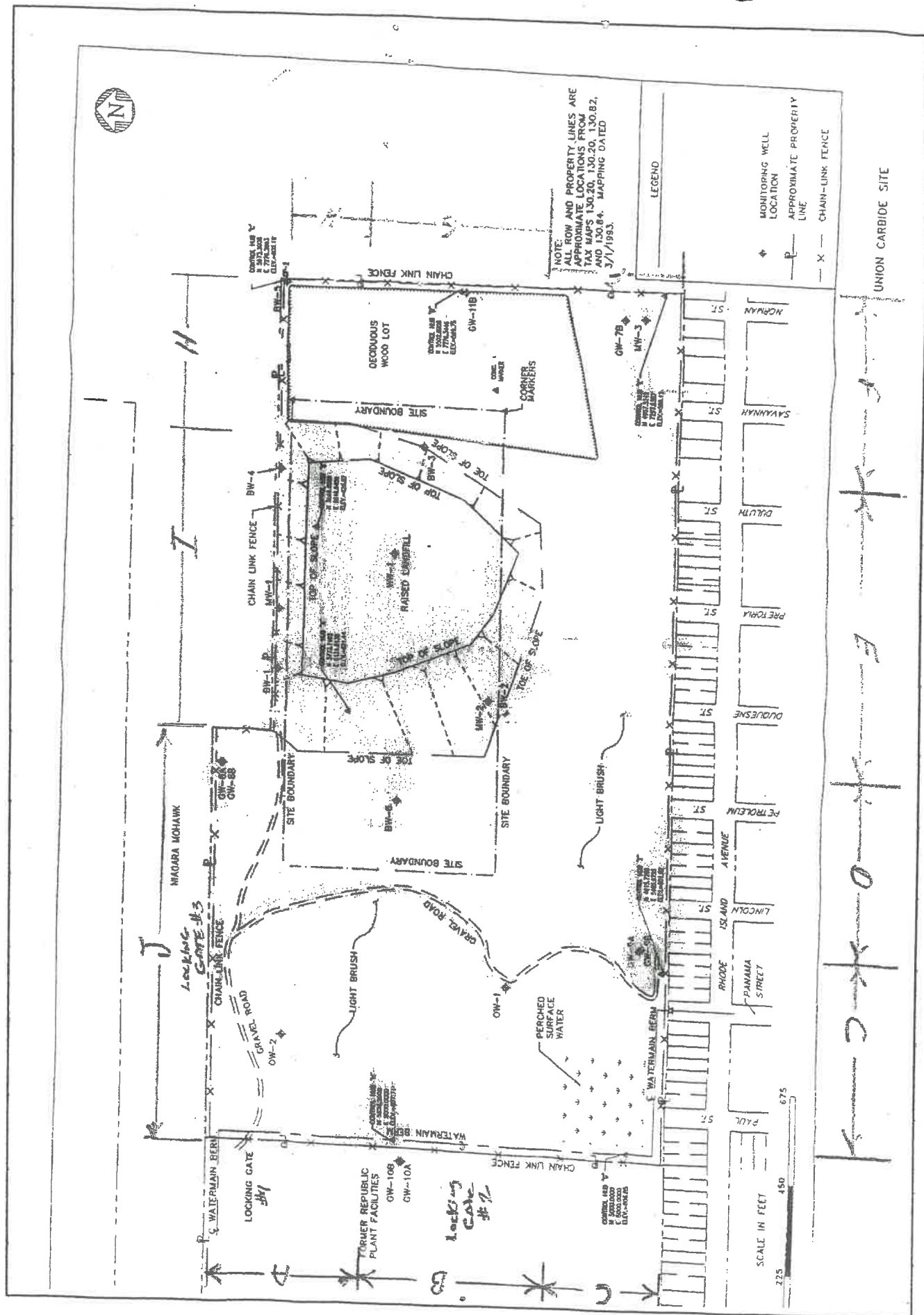
**SURROUNDING AREA COMMENTS:** (Check for condition, damage, signs of security breach)

None

**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.

7/22/22  
Date





# APPENDIX A - WEEKLY GENERAL LANDFILL AND SITE SECURITY INSPECTION REPORT

Date	Time	Inspector Name
7/29/22	3:30	John Swanson

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)

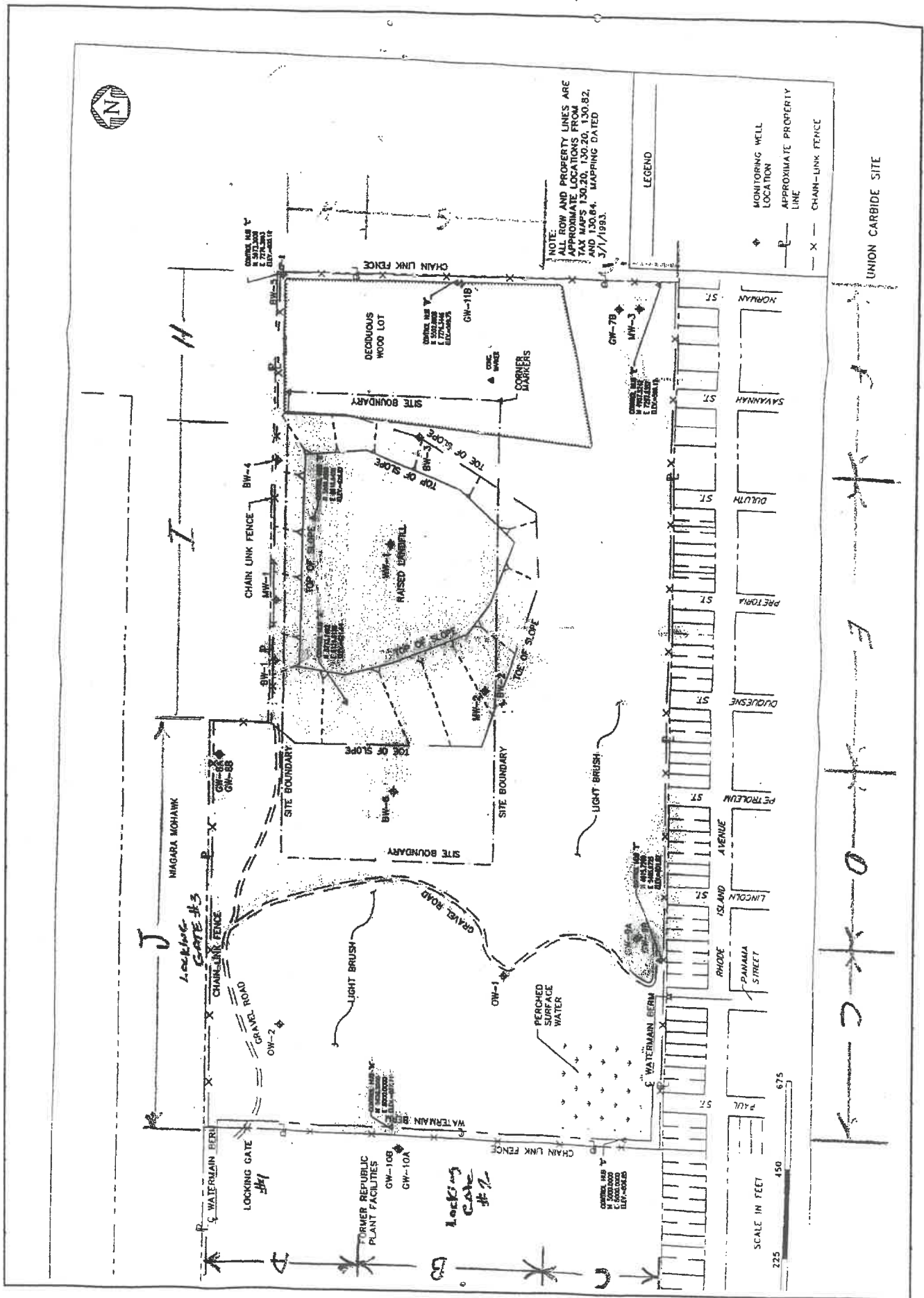
all good

**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.

Employee

Date \_\_\_\_\_



# APPENDIX A - WEEKLY GENERAL LANDFILL AND SITE SECURITY INSPECTION REPORT

Date	Time	Inspector Name
8/5/22	4:00	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

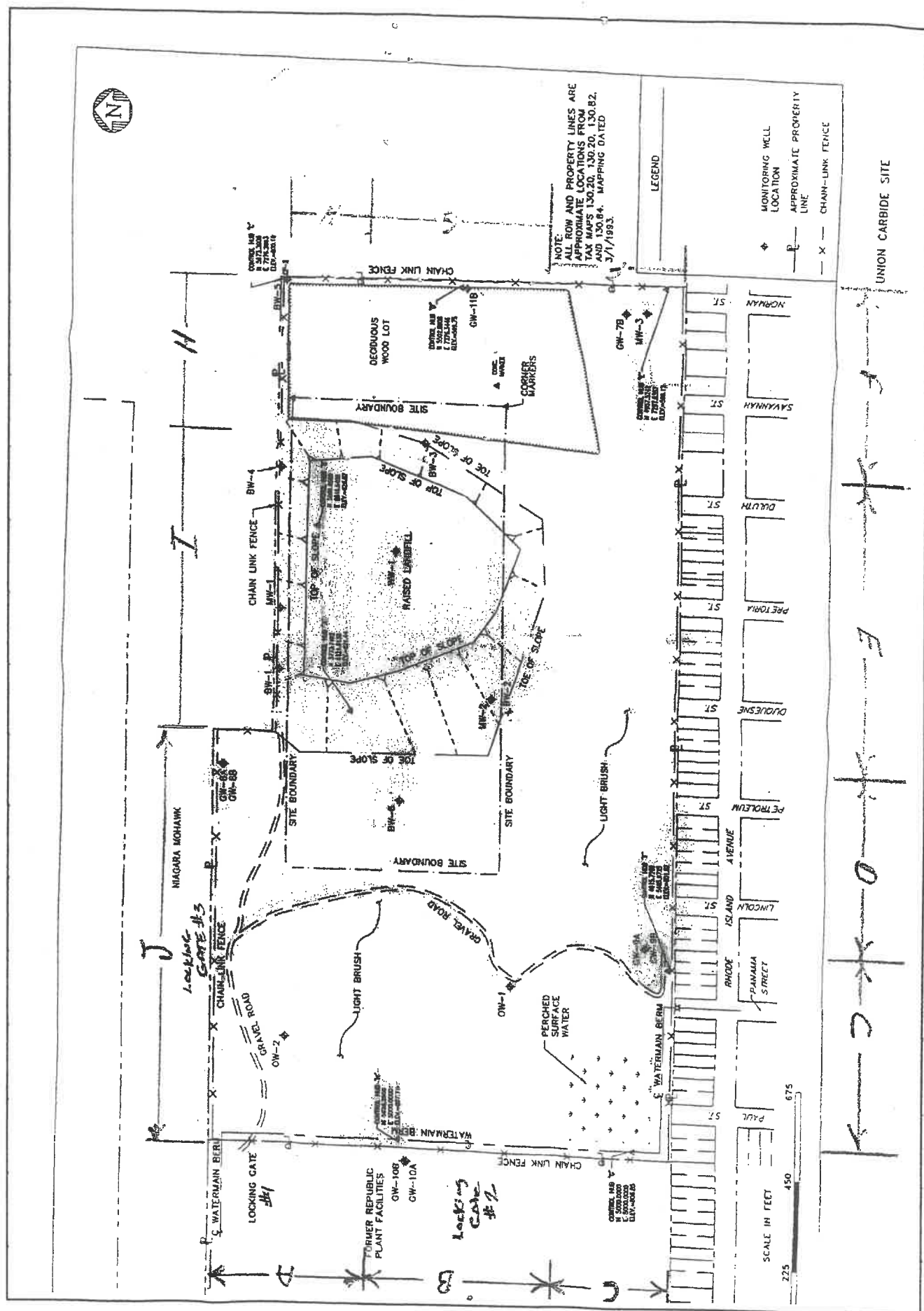
**SURROUNDING AREA COMMENTS:** (Check for condition, damage, signs of security breach)

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.

8/5/22  
Date



**APPENDIX A - WEEKLY GENERAL LANDFILL AND SITE SECURITY INSPECTION REPORT**

Date	Time	Inspector Name
8/12/22	7 AM	John S.

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)

None

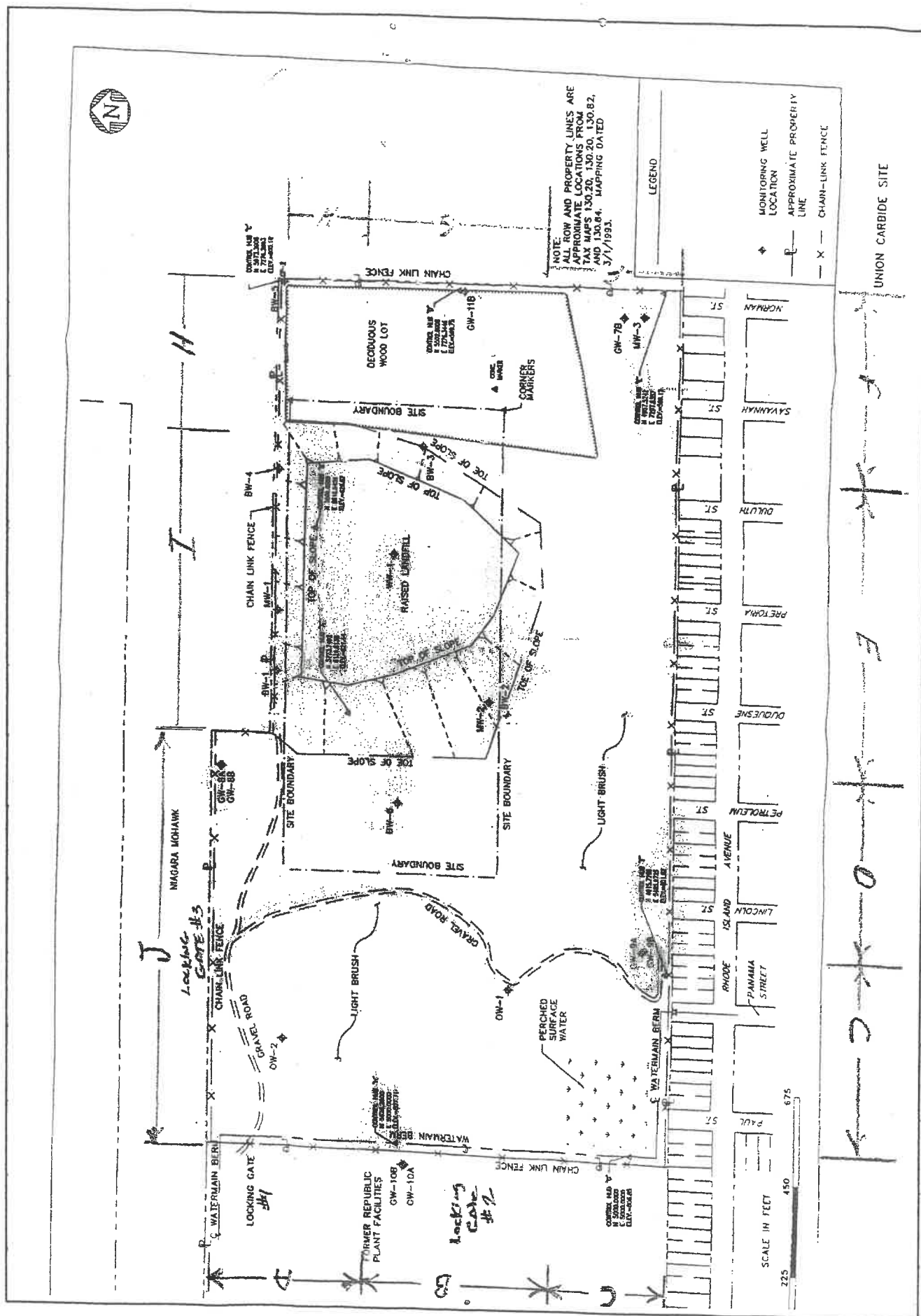
**SURROUNDING AREA COMMENTS:** (Check for condition, damage, signs of security breach)

None

**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.

8/12/22  
Date





**APPENDIX A - WEEKLY GENERAL LANDFILL AND SITE SECURITY INSPECTION REPORT**

Date	Time	Inspector Name
8/20/22	9:00	John Seeger

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)

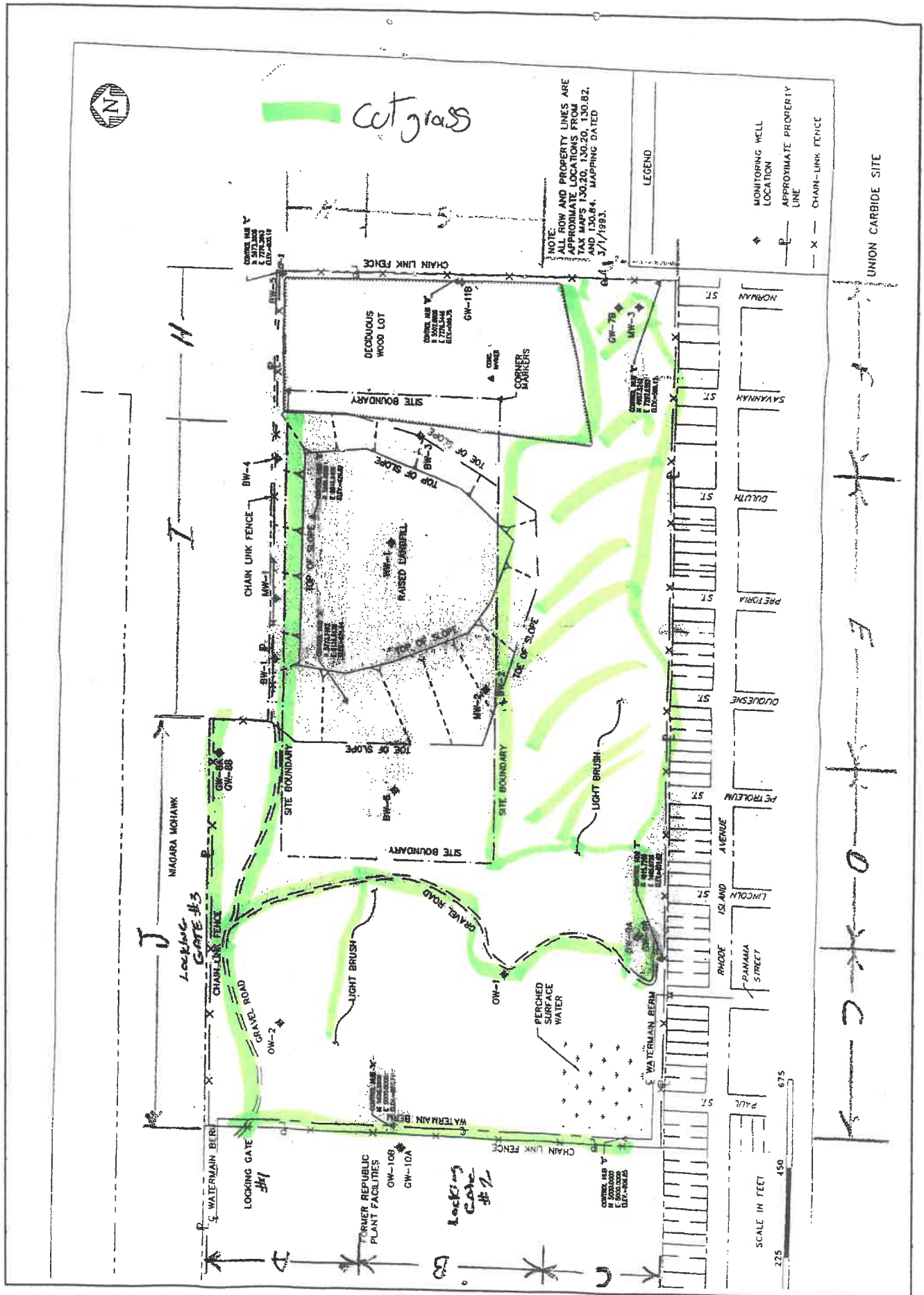
all good

**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.**

The Screager  
Employee

8/20/22  
Date





# APPENDIX A - WEEKLY GENERAL LANDFILL AND SITE SECURITY INSPECTION REPORT

Date	Time	Inspector Name
8/29/22	12:00	John Swenleng

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.

**APPENDIX A - WEEKLY GENERAL LANDFILL AND SITE SECURITY INSPECTION REPORT**

Date	Time	Inspector Name
9/3/22	7:00	John Scurry

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: 9/3/22

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
9/9/22	7 AM	John Sukarengen

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)

None

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

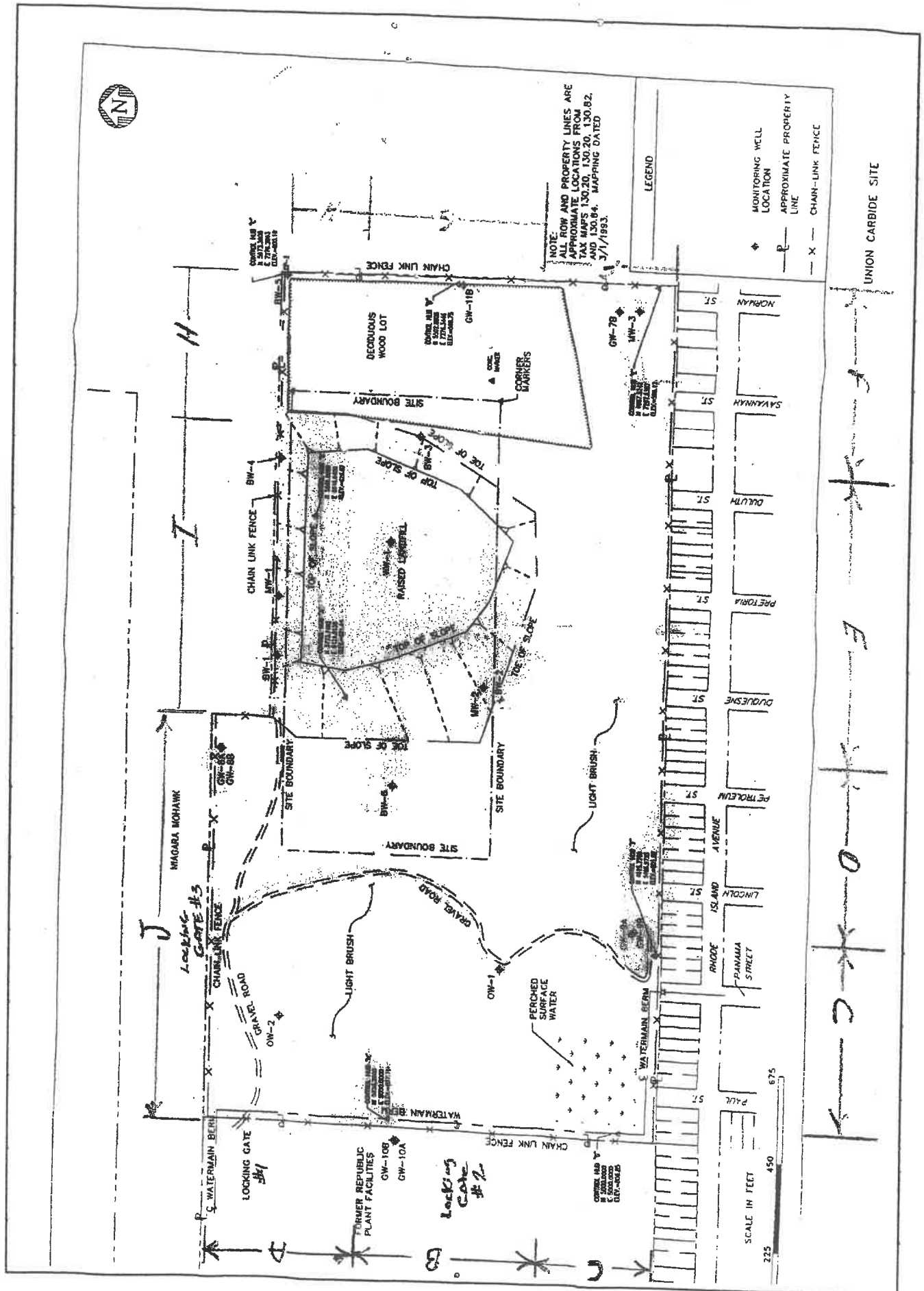
None

RECORD THE DATE(S) THAT THE ENTIRE CAP WAS MOWED: 9/3/22

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 Swarngen  
Employee

9/9/22  
Date





# APPENDIX A - WEEKLY GENERAL LANDFILL AND SITE SECURITY INSPECTION REPORT

Date	Time	Inspector Name
9/16/22	12:30	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)

Good

**CAP COMMENTS:** (Check for erosion and adequate vegetation)

None

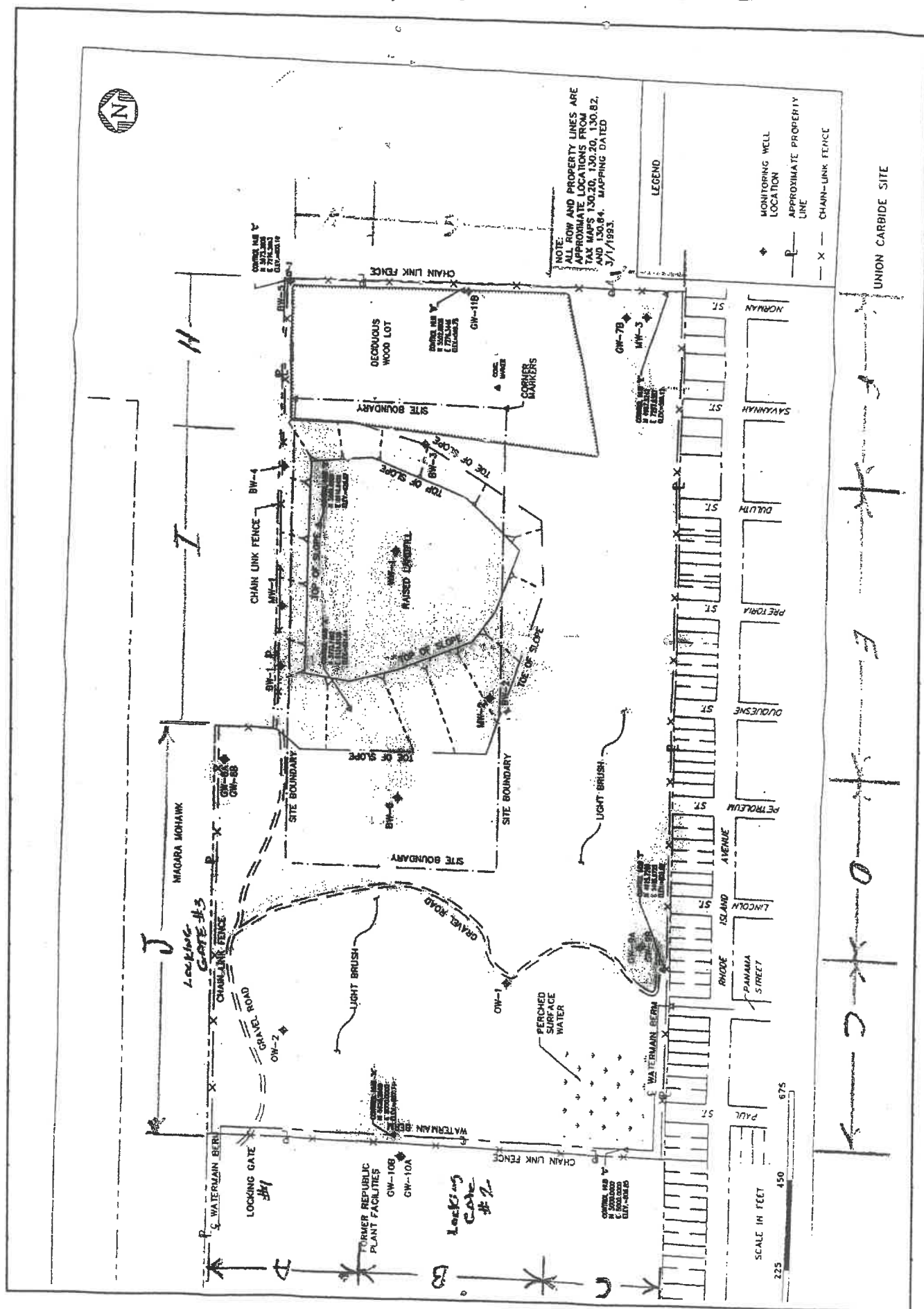
**SURROUNDING AREA COMMENTS:** (Check for condition, damage, signs of security breach)

None

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.

9/16/22  
Date



**APPENDIX A - WEEKLY GENERAL LANDFILL AND SITE SECURITY INSPECTION REPORT**

Date	Time	Inspector Name
9/24/22	9:00	John Seising

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

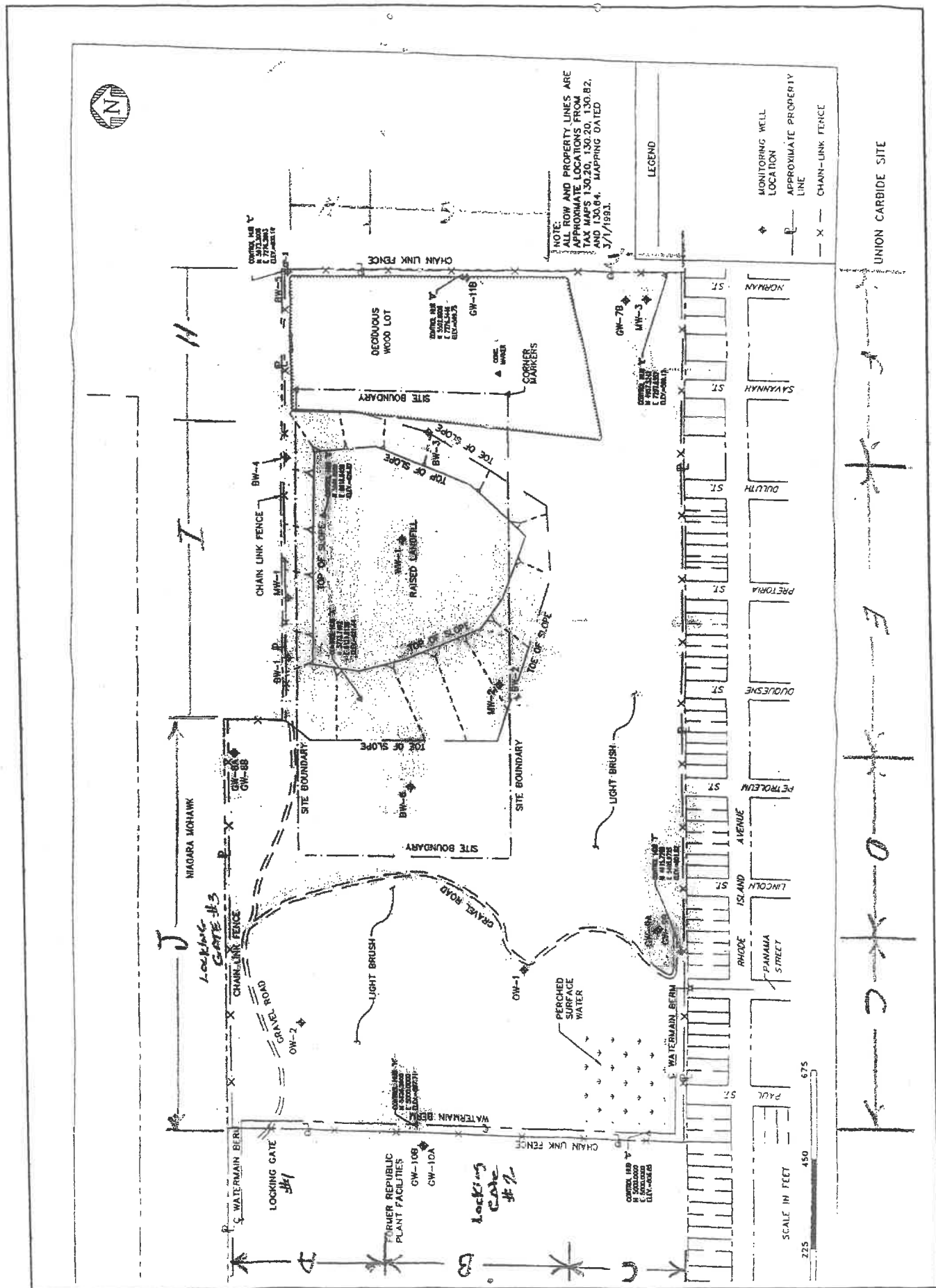
**RECORD THE DATE(S) THAT THE ENTIRE CAP WAS MOWED:** \_\_\_\_\_

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.



Employee \_\_\_\_\_

Date \_\_\_\_\_



**APPENDIX A - WEEKLY GENERAL LANDFILL AND SITE SECURITY INSPECTION REPORT**

Date	Time	Inspector Name
9/30/22	11AM	Charles Luke

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)

None

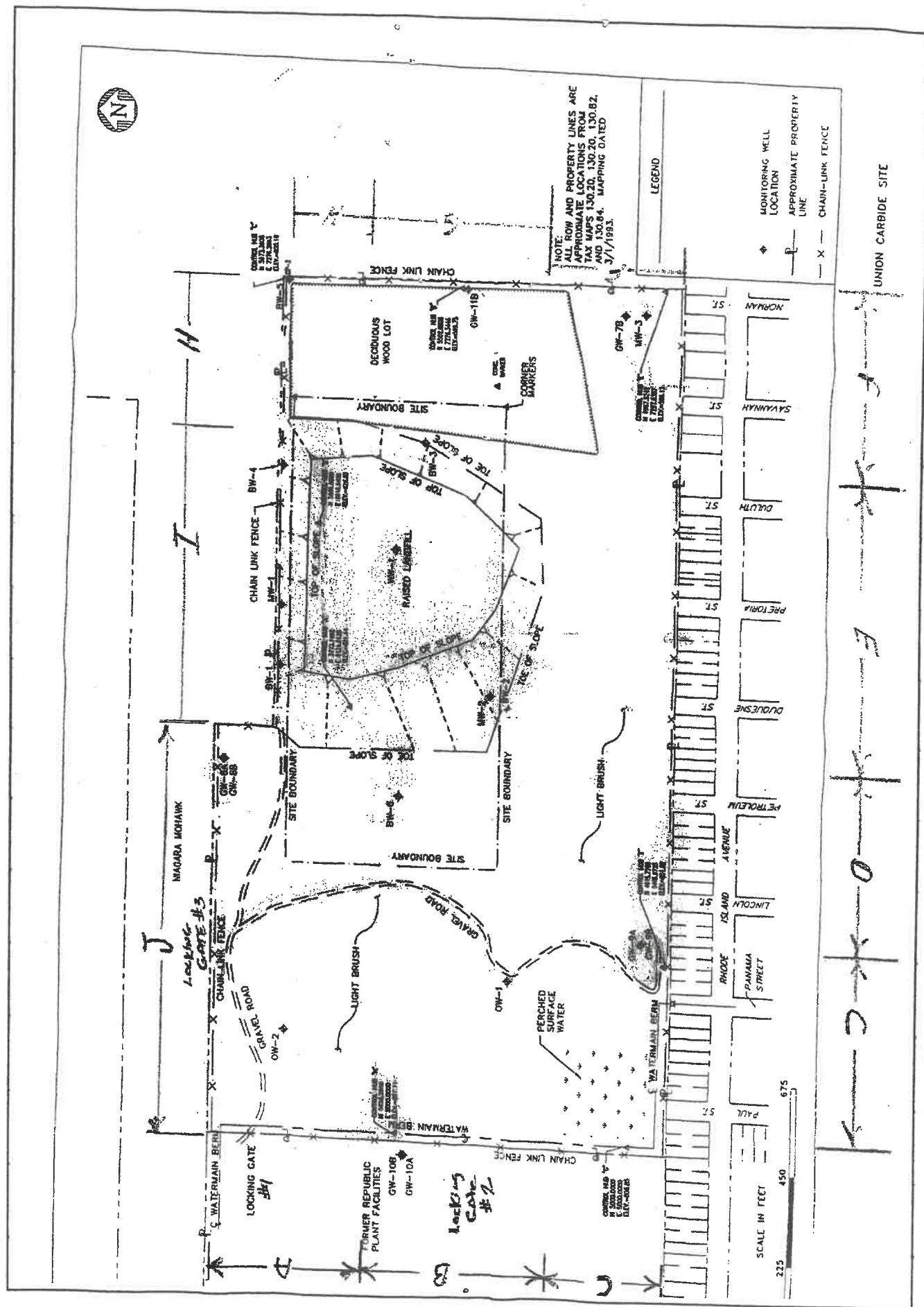
**SURROUNDING AREA COMMENTS:** (Check for condition, damage, signs of security breach)

None

**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.

9/30/22  
Date



**APPENDIX A - WEEKLY GENERAL LANDFILL AND SITE SECURITY INSPECTION REPORT**

Date	Time	Inspector Name
10/7/22	7AM	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)

Good

**CAP COMMENTS:** (Check for erosion and adequate vegetation)

None

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

None

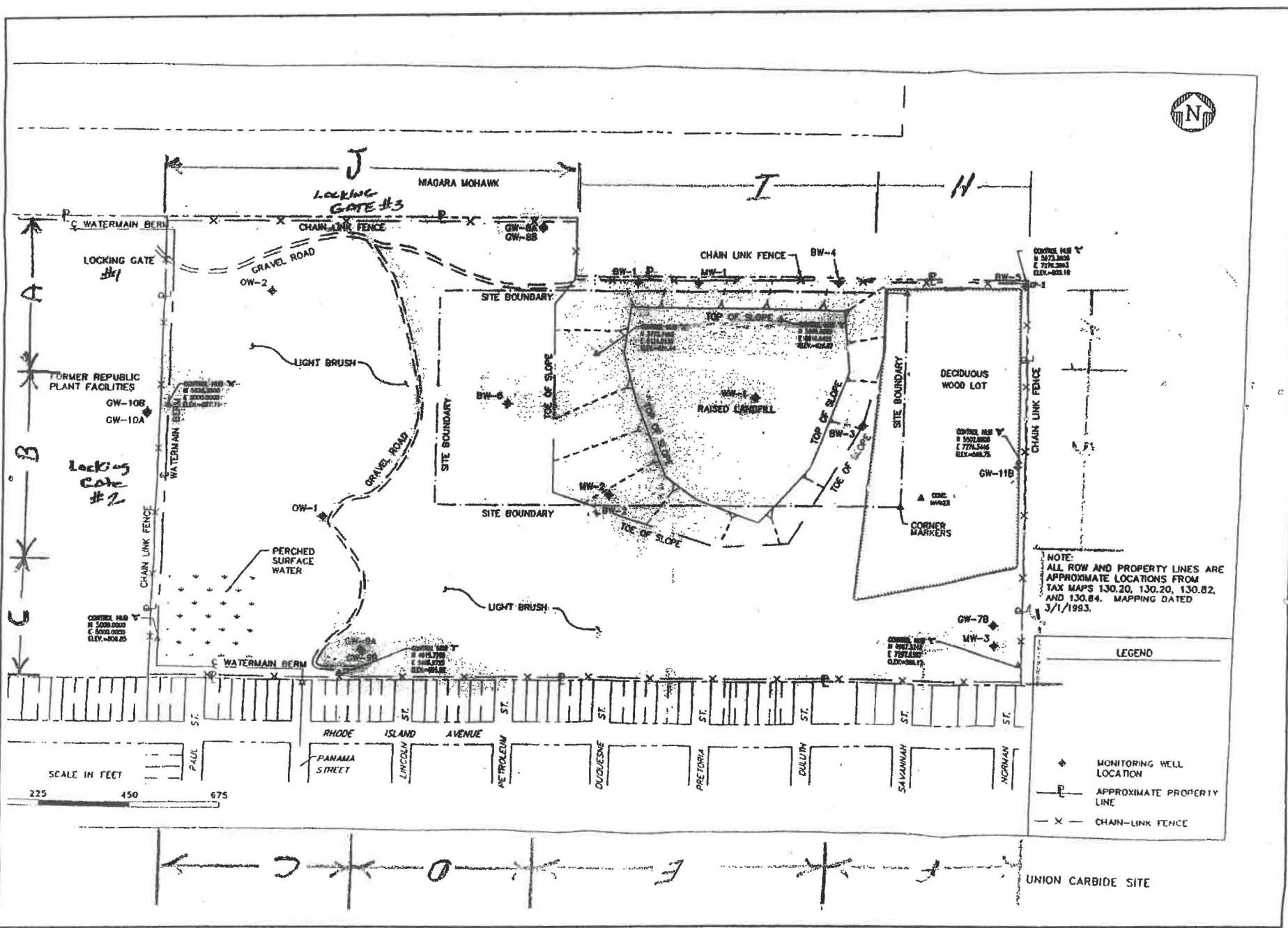
**RECORD THE DATE(S) THAT THE ENTIRE CAP WAS MOWED:** \_\_\_\_\_

**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 10/7/22

Date John Swearingen



**APPENDIX A - WEEKLY GENERAL LANDFILL AND SITE SECURITY INSPECTION REPORT**

Date	Time	Inspector Name
10/14/22	7 AM	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)

Good

**CAP COMMENTS:** (Check for erosion and adequate vegetation)

None

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

None

**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
10/21/22	10AM	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)

Good

**CAP COMMENTS:** (Check for erosion and adequate vegetation)

None

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

None

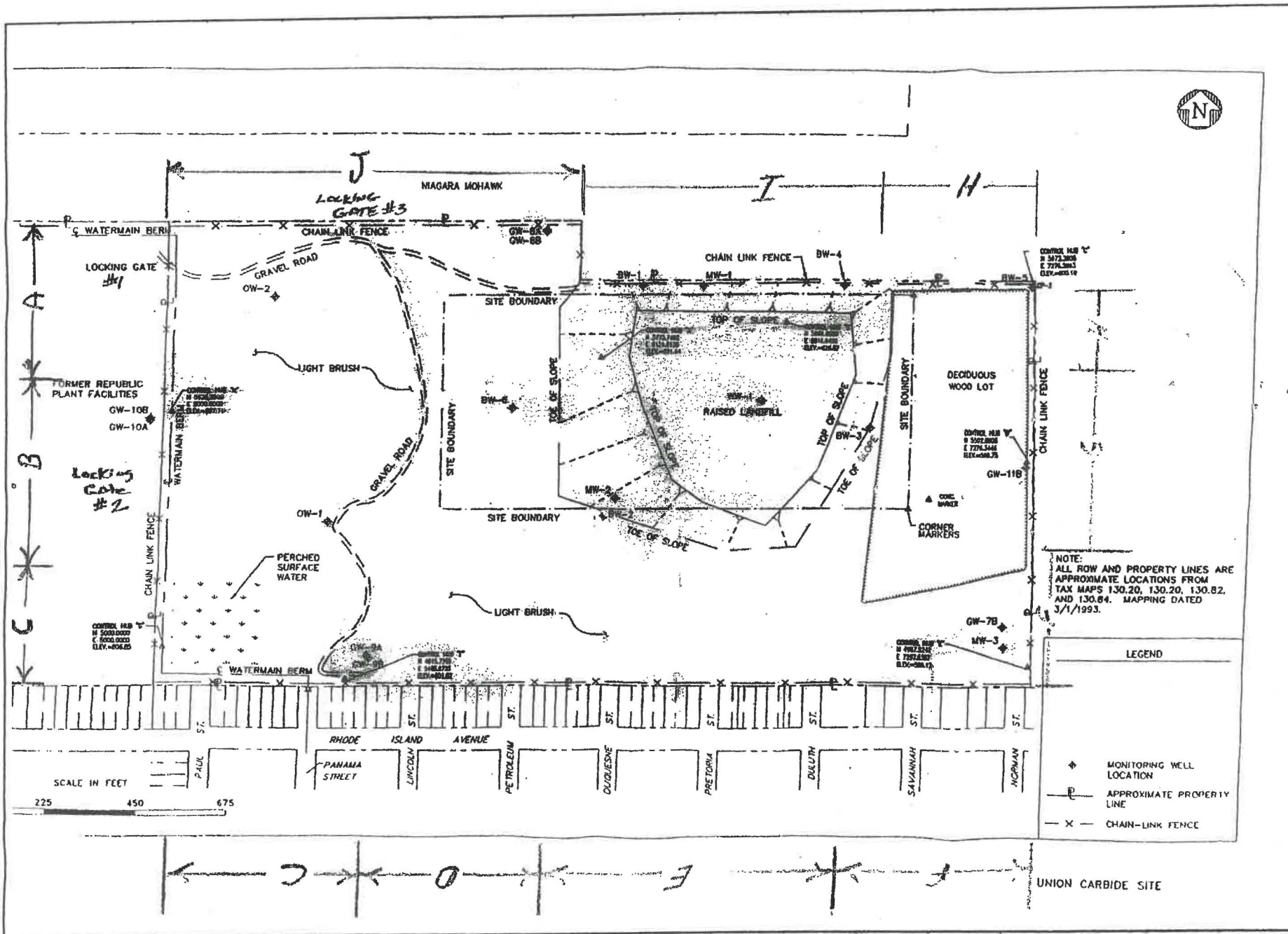
**RECORD THE DATE(S) THAT THE ENTIRE CAP WAS MOWED:** \_\_\_\_\_

**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 Swearingen*

Date *10/21/22*



**APPENDIX A - WEEKLY GENERAL LANDFILL AND SITE SECURITY INSPECTION REPORT**

Date	Time	Inspector Name
10/29/22	12:30	John Severino

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)

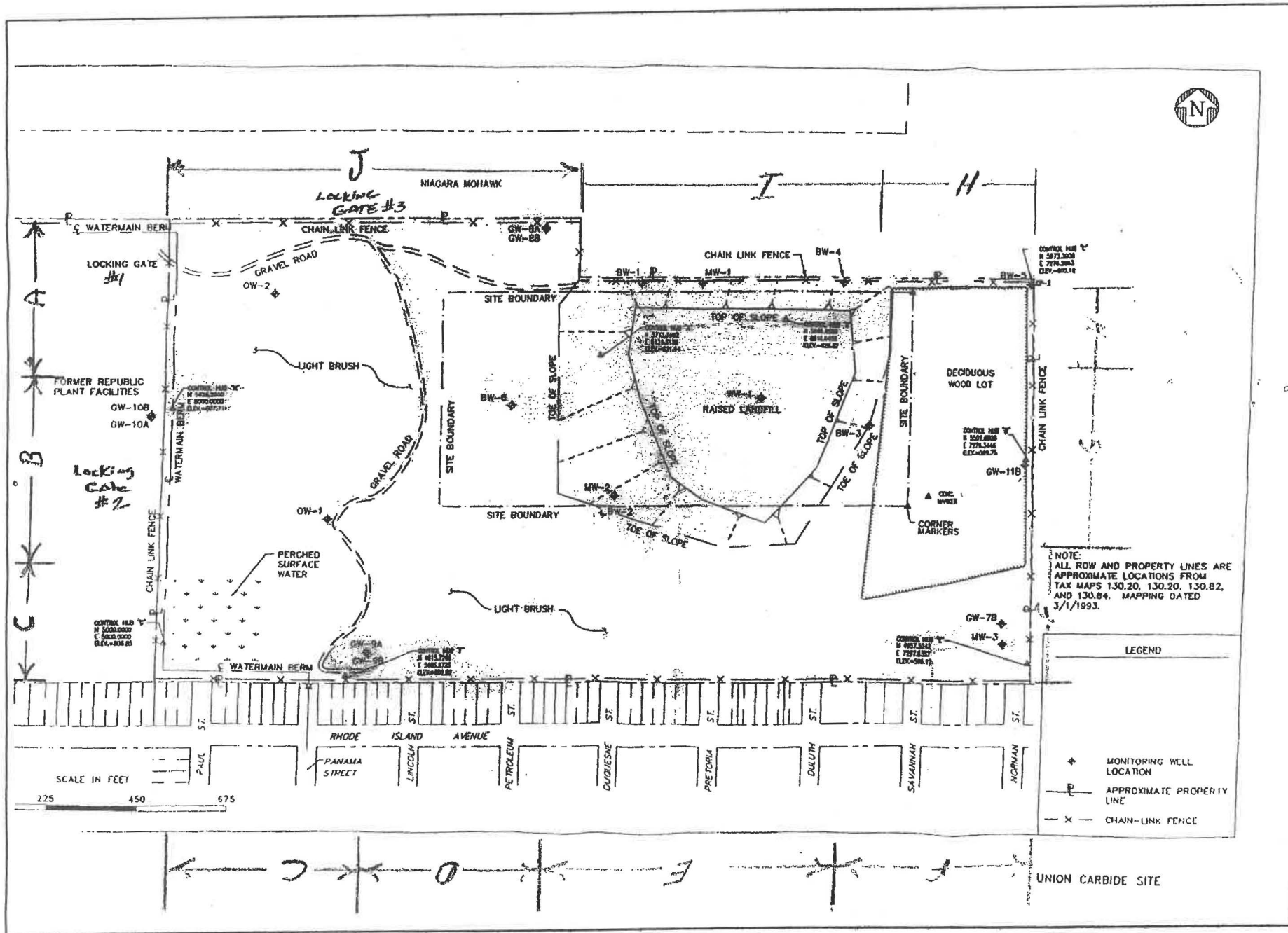
all good

**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.**

Employee

Date



# APPENDIX A - WEEKLY GENERAL LANDFILL AND SITE SECURITY INSPECTION REPORT

Date	Time	Inspector Name
11-4-22	4:30	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)

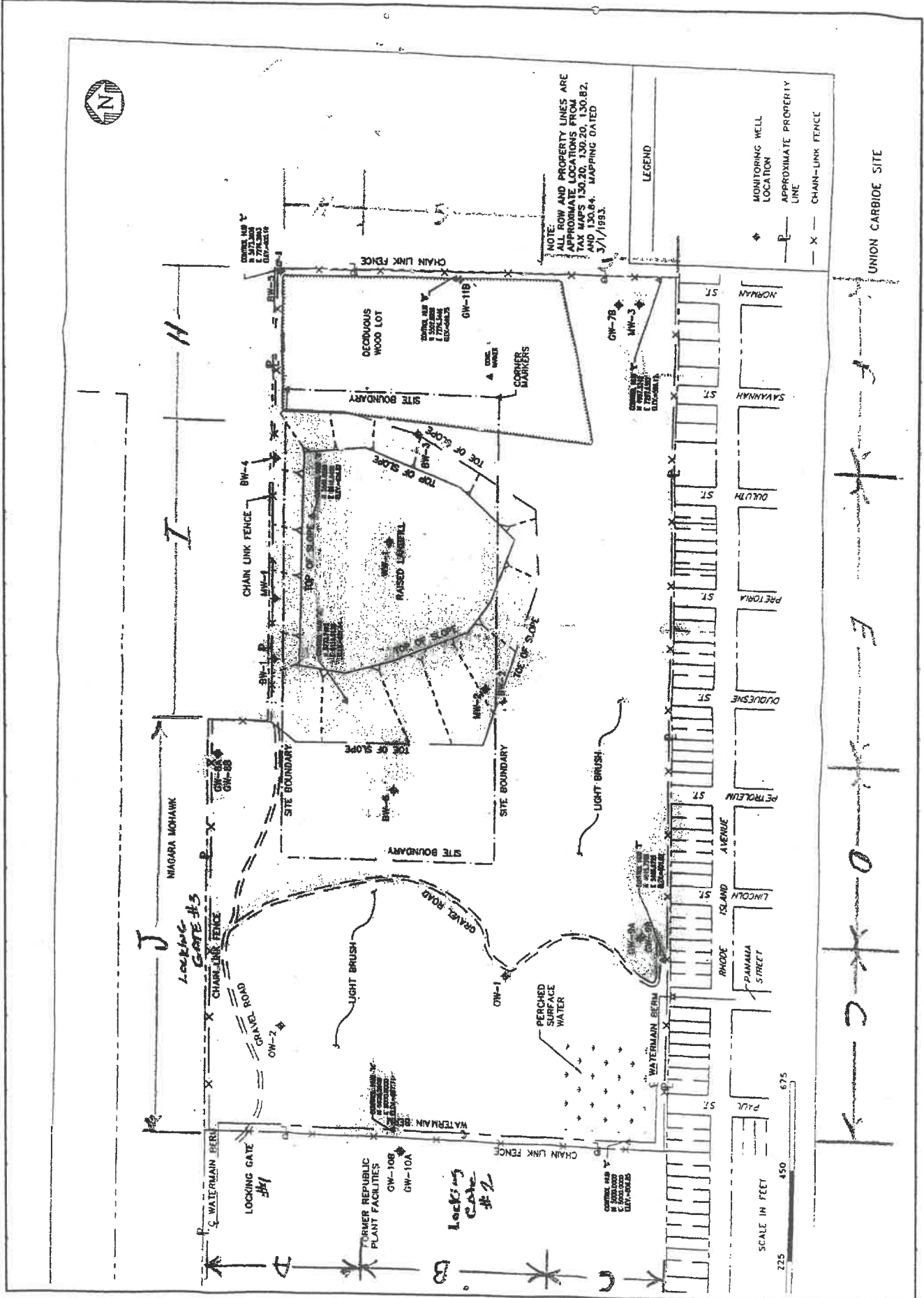
all good

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

11/4  
Date



# APPENDIX A - WEEKLY GENERAL LANDFILL AND SITE SECURITY INSPECTION REPORT

Date	Time	Inspector Name
11-14-22	<del>12:30</del> 3:30	John Sacramento

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

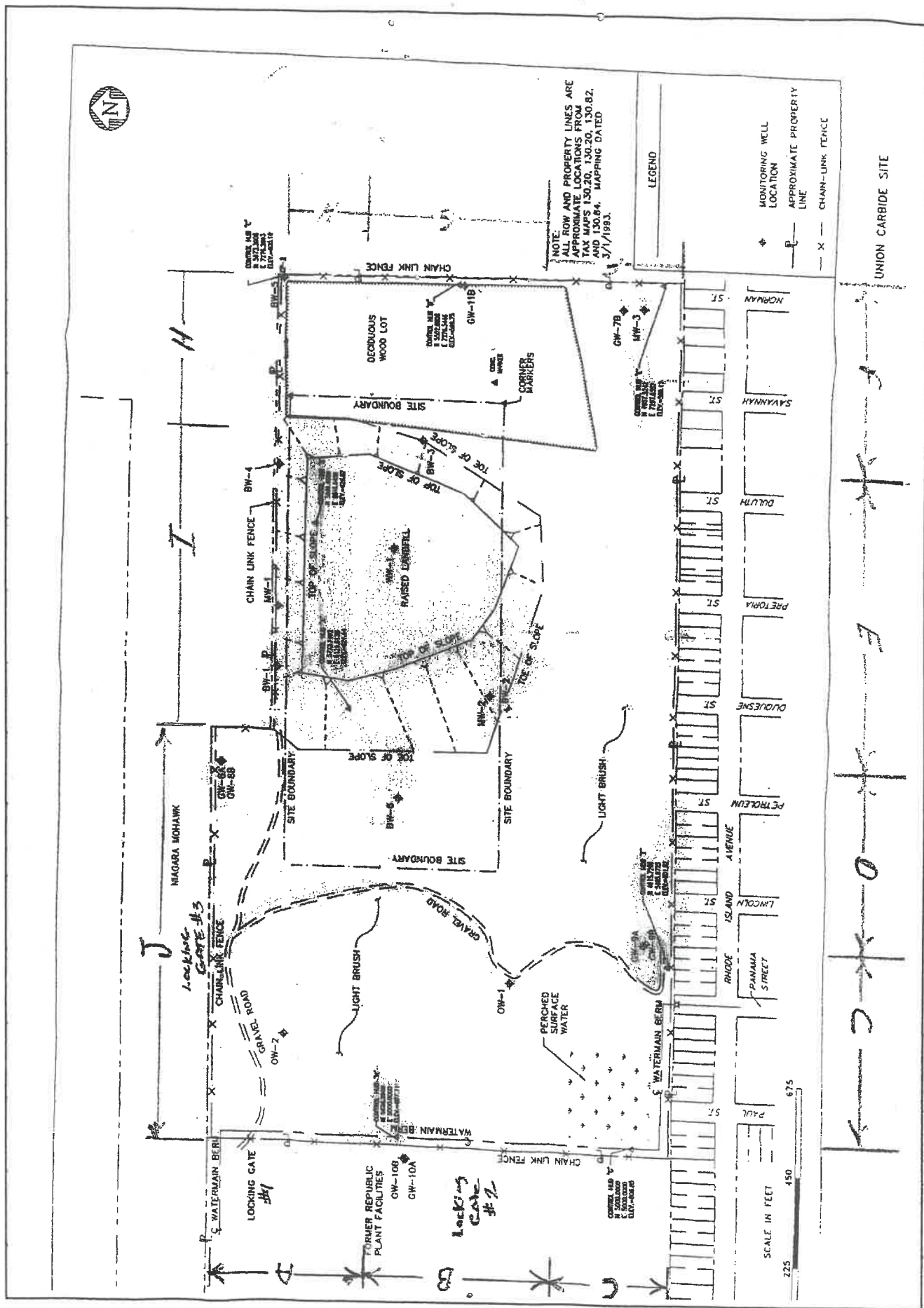
RECORD THE DATE(S) THAT THE ENTIRE CAP WAS MOWED: \_\_\_\_\_

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.



Employee

Date



# APPENDIX A - WEEKLY GENERAL LANDFILL AND SITE SECURITY INSPECTION REPORT

Date	Time	Inspector Name
11/21/22	4:00	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

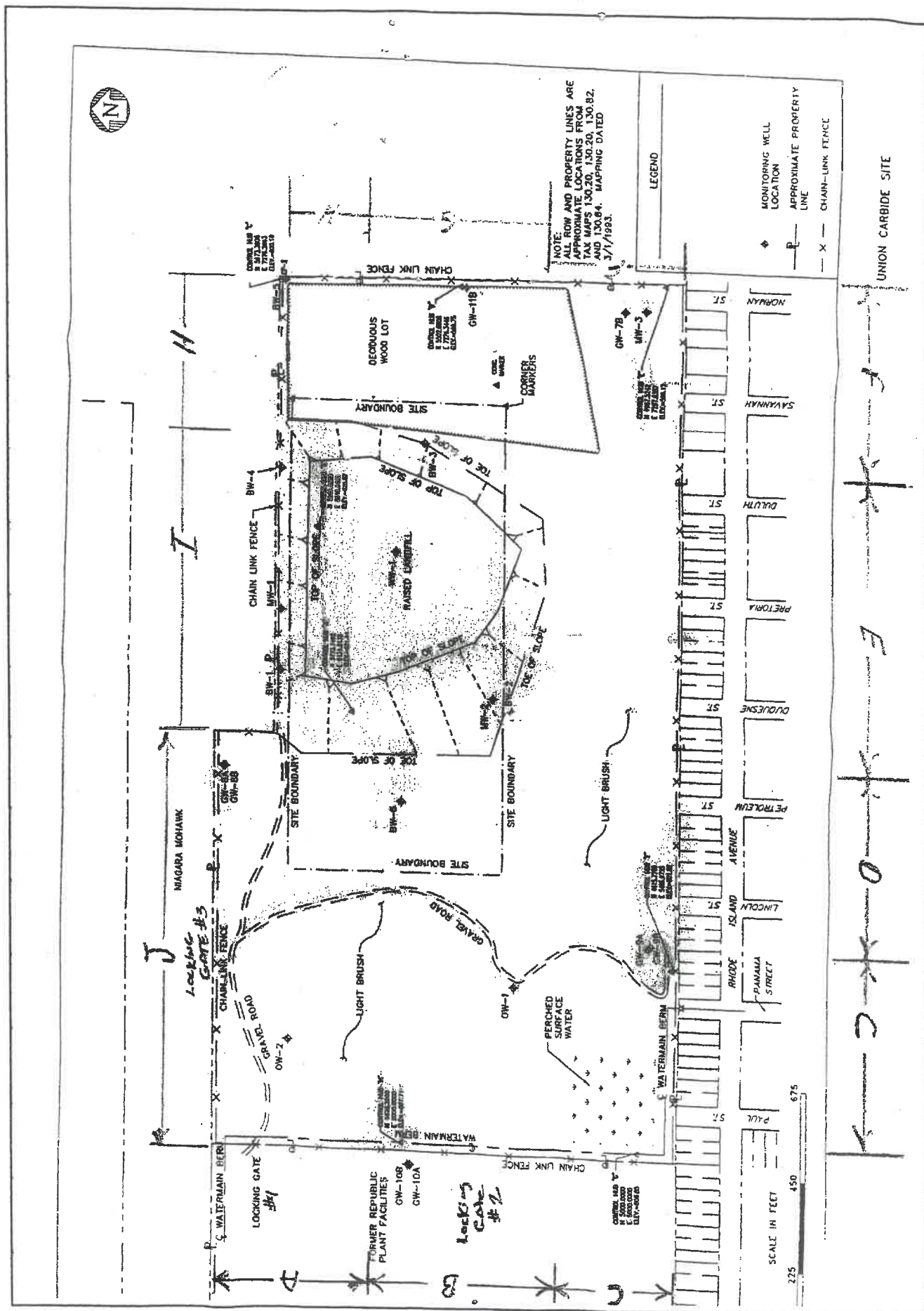
RECORD THE DATE(S) THAT THE ENTIRE CAP WAS MOWED: \_\_\_\_\_

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.



Employee

Date



# APPENDIX A - WEEKLY GENERAL LANDFILL AND SITE SECURITY INSPECTION REPORT

Date	Time	Inspector Name
11/28/22	4:00	Edna S. S. S. S.

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: \_\_\_\_\_

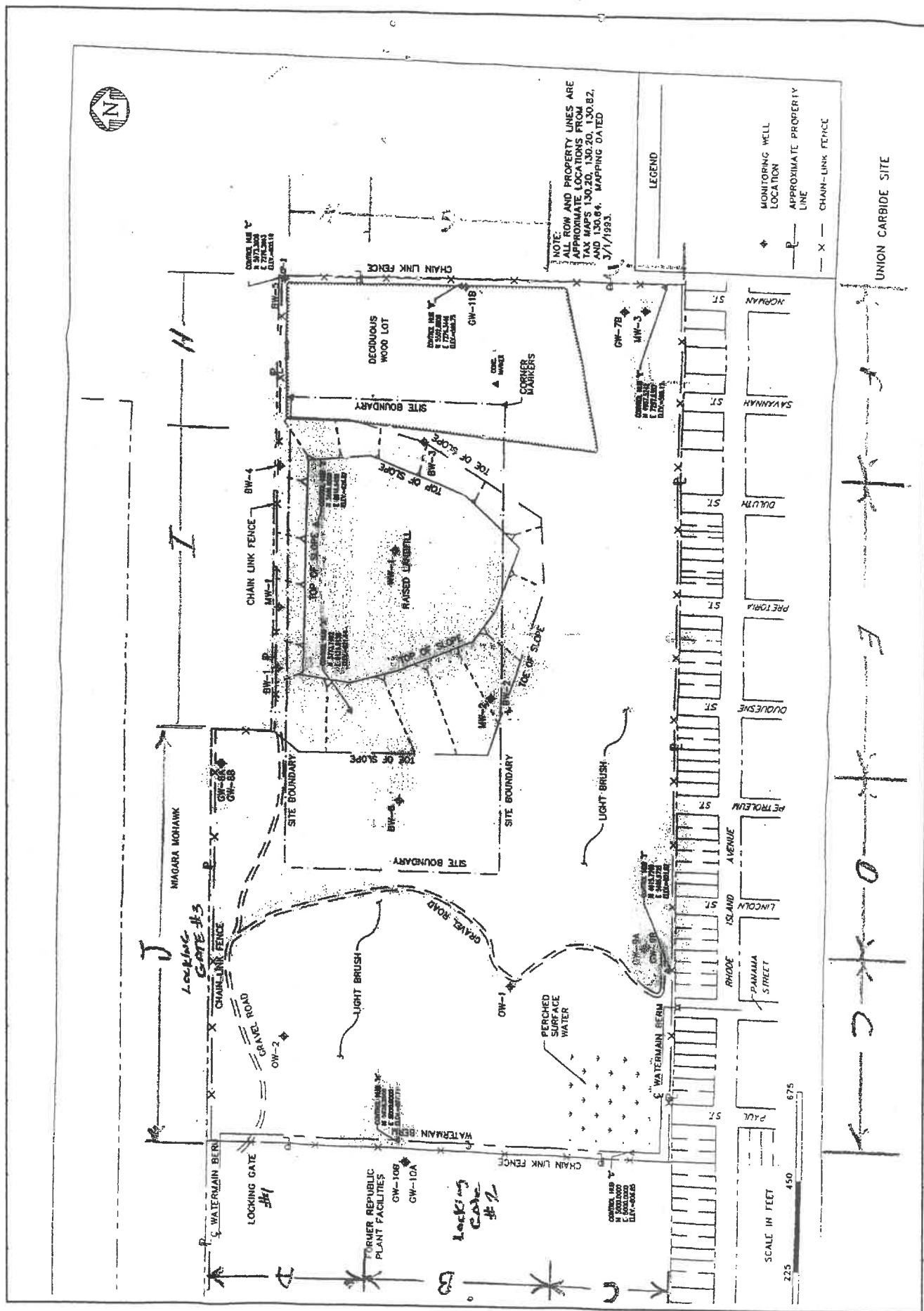
IN THE EVENT THAT ANY SIGN OF A SITE SECURITY BREACH IS IDENTIFIED DURING THE ABOVE SITE INSPECTIONS, COMPLETE A FULL GROUNDWATER MONITORING WELL INSPECTION AND DOCUMENT RESULTS USING THE QUARTERLY GROUNDWATER WELL INSPECTION REPORT FORM (APPENDIX B) AND ATTACH TO THIS FORM.

Employee

John

Date

11/28



**APPENDIX A - WEEKLY GENERAL LANDFILL AND SITE SECURITY INSPECTION REPORT**

Date	Time	Inspector Name
12-4-22	10: AM	Tim Kowalik

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*

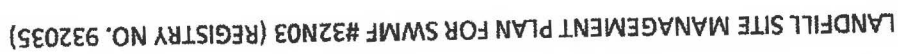
**SURROUNDING AREA COMMENTS:** (Check for condition, damage, signs of security breach)

*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.

12/4/22





**APPENDIX A - WEEKLY GENERAL LANDFILL AND SITE SECURITY INSPECTION REPORT**

Date	Time	Inspector Name
12/12/22	4:00	John Sweeney

ENCE ARE	OK	DAMAGED	REPAIR DATE	REMARKS
A	✓			
B	✓			
C	✓			
D	✓			
E	✓			
F	✓			
G	✓			
H	✗	hole cut in fence		
I	✓			
J	✓			

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

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

hole in fence

**CAP COMMENTS:** (Check for erosion and adequate vegetation)

all good

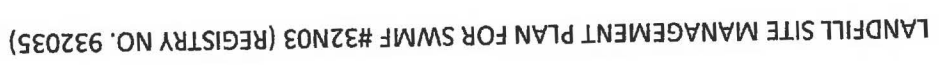
**SURROUNDING AREA COMMENTS:** (Check for condition, damage, signs of security breach)

hole in fence (Sector H)

**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.

12/12/22



**APPENDIX A - WEEKLY GENERAL LANDFILL AND SITE SECURITY INSPECTION REPORT**

Date	Time	Inspector Name
12/19/22	4:00	John Swearingen

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

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

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

hole in fence

**CAP COMMENTS:** (Check for erosion and adequate vegetation)

all good

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

hole in fence

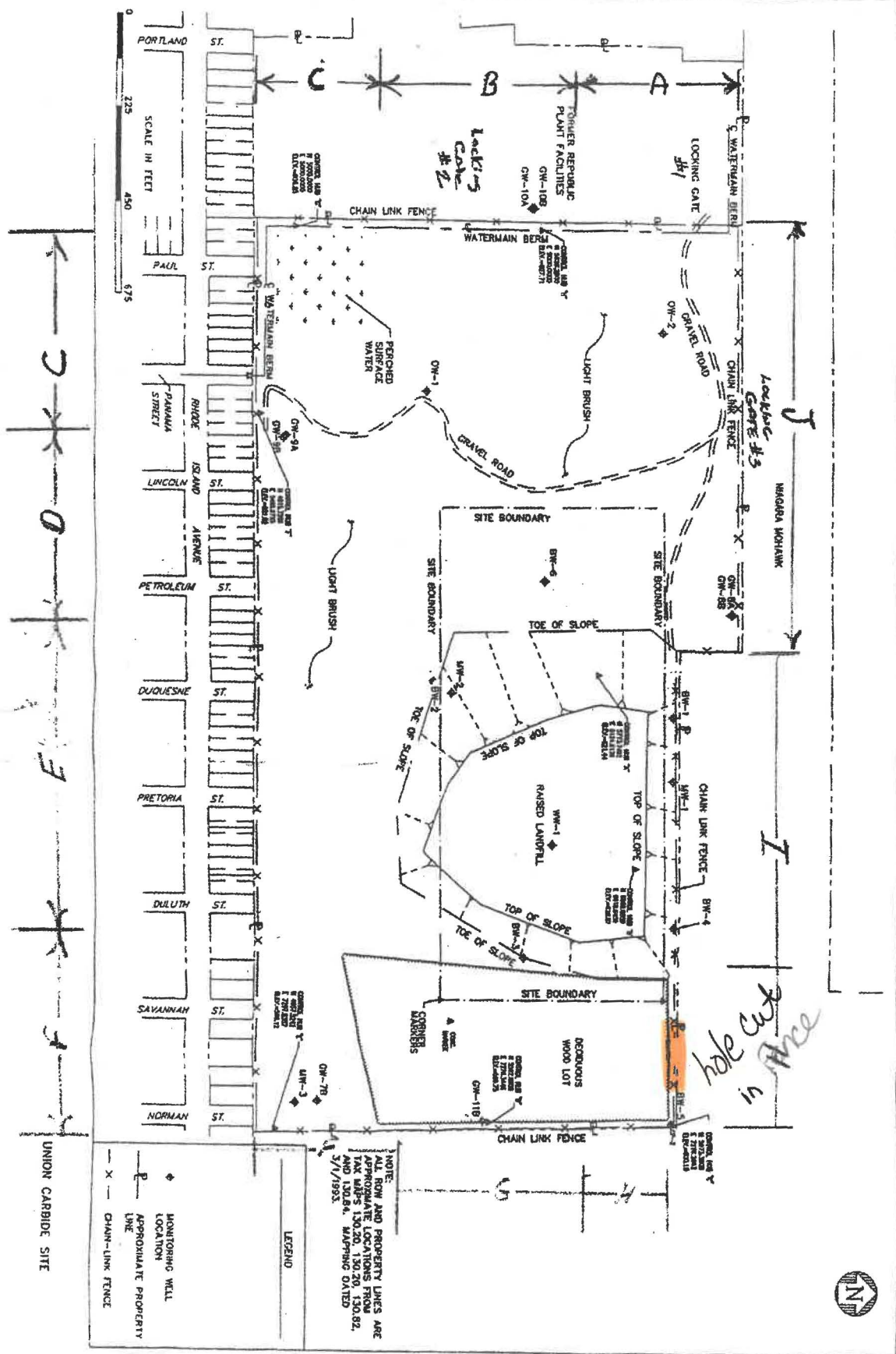
**RECORD THE DATE(S) THAT THE ENTIRE CAP WAS MOWED:** \_\_\_\_\_

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

12/19/22



## Appendix G

### Copies of Quarterly Groundwater Well Inspection Reports – 2022

# APPENDIX A - WEEKLY GENERAL LANDFILL AND SITE SECURITY INSPECTION REPORT

Date	Time	Inspector Name
12-30-22	4:00	John Sweasager

ENCE ARE	OK	DAMAGED	REPAIR DATE	REMARKS
A	/			
B	/			
C	/			
D	/			
E	/			
F	/			
G		Fallen tree		tree fell and damaged fence
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)

tree fell and damaged fence

**CAP COMMENTS:** (Check for erosion and adequate vegetation)

all good

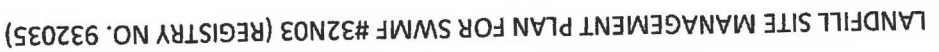
**SURROUNDING AREA COMMENTS:** (Check for condition, damage, signs of security breach)

tree fell Damaged fence

**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.

12/30/22



1st Qtr

Feb 12, 2022

## APPENDIX B - 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	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	good	
BW4-86	yes	good	good	good	
BW5-86	yes	good	good	good	
BW6-86	yes	good	good	good	
WW1-86	yes	good	good	good	
OW1-88	yes	good	good	good	
OW2-88	yes	good	good	good	

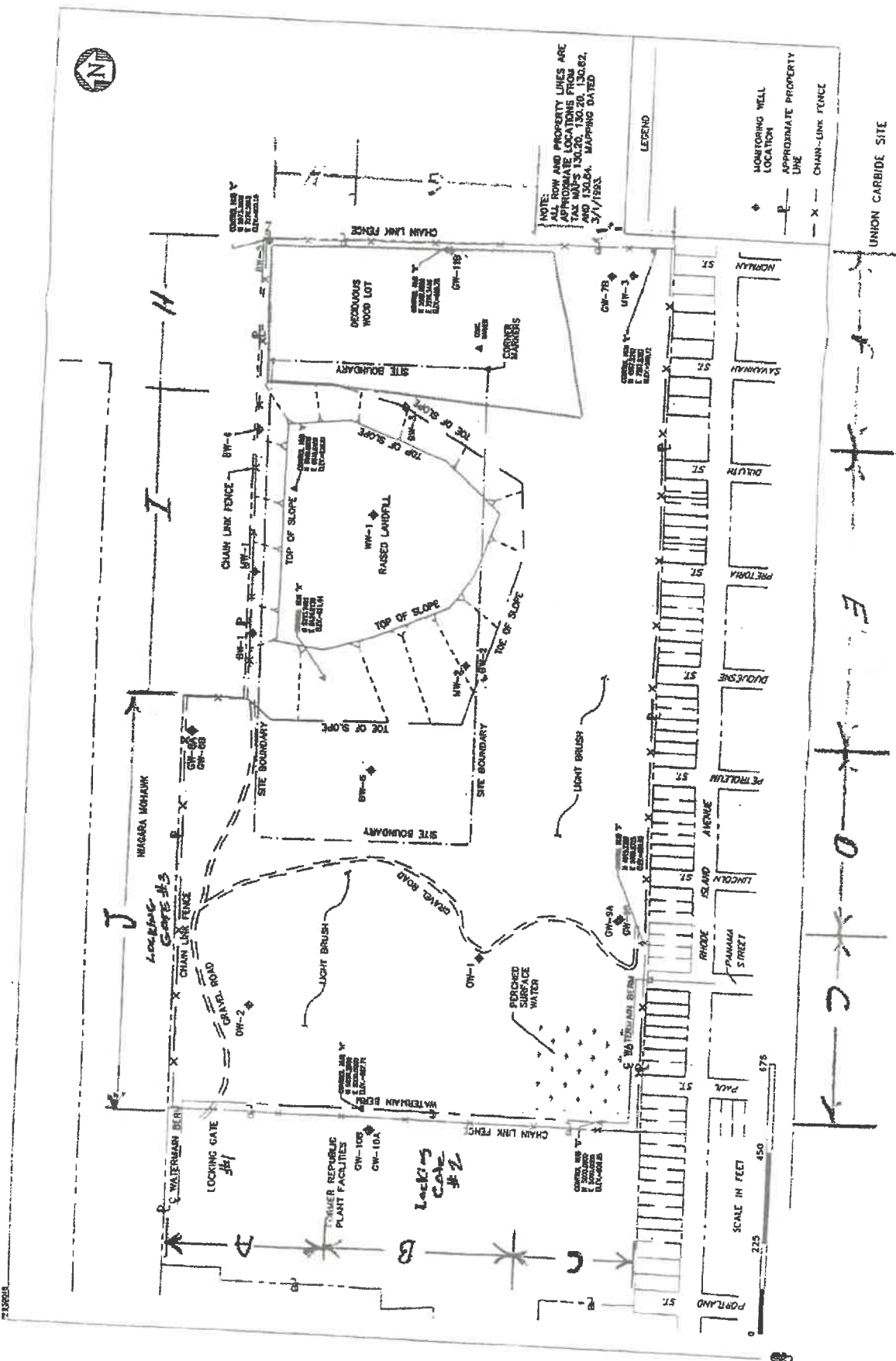
### ON-SITE WELLS INSTALLED BY NYSDEC

(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	
GW8A-93	yes	good	good	good	
GW8B-93	yes	good	good	good	
GW9A-93	yes	good	good	good	
GW9B-93	yes	good	good	good	
GW11B-93	yes	good	good	good	



## 235919



# APPENDIX B - QUARTERLY GROUNDWATER WELL INSPECTION REPORT

## GRAFTECH WELLS

May 6 2022

WELL I.D. NUMBER	WELL I.D. TAG INTACT (YES/NO)	LOCK CONDITION	OUTER CASING CONDITION	CONCRETE SEAL CONDITION	COMMENTS
MW1-78	yes	locked	good	good	
MW2-78	yes	locked	good	good	
MW3-79	yes	locked	good	good	
BW1-86	yes	locked	good	good	
BW2-86	yes	locked	good	good	
BW3-86	yes	locked	good	not visible	
BW4-86	yes	locked	good	good	
BW5-86	yes	locked	good	cracked	
BW6-86	yes	locked	good	cracked	
WW1-86	no	locked	good	not visible	
OW1-88	yes	locked	good	not visible	
OW2-88	yes	locked	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	locked	good	Bad	base from ground
GW8A-93	yes	locked	good	"Bad" loose	
GW8B-93	yes	locked	good	good	
GW9A-93	yes	locked	good	Bad	loose from ground
GW9B-93	yes	locked	good	Bad	loose from ground
GW11B-93	yes	locked	good	good	

John S

5/10/22





## APPENDIX B - QUARTERLY GROUNDWATER WELL INSPECTION REPORT

### GRAFTECH WELLS

*September*

WELL I.D. NUMBER	WELL I.D. TAG INTACT (YES/NO)	LOCK CONDITION	OUTER CASING CONDITION	CONCRETE SEAL CONDITION	COMMENTS
MW1-78	<i>yes</i>	<i>locked</i>	<i>good</i>	<i>good</i>	
MW2-78	<i>yes</i>	<i>locked</i>	<i>good</i>	<i>good</i>	
MW3-79	<i>yes</i>	<i>locked</i>	<i>good</i>	<i>good</i>	
BW1-86	<i>yes</i>	<i>locked</i>	<i>good</i>	<i>good</i>	
BW2-86	<i>yes</i>	<i>locked</i>	<i>good</i>	<i>good</i>	
BW3-86	<i>yes</i>	<i>locked</i>	<i>good</i>	<i>not visible</i>	
BW4-86	<i>no</i>	<i>locked</i>	<i>good</i>	<i>good</i>	
BW5-86	<i>yes</i>	<i>locked</i>	<i>good</i>	<i>cracked</i>	
BW6-86	<i>yes</i>	<i>locked</i>	<i>good</i>	<i>cracked</i>	
WW1-86	<i>no</i>	<i>locked</i>	<i>good</i>	<i>not visible</i>	
OW1-88	<i>yes</i>	<i>locked</i>	<i>good</i>	<i>not visible</i>	
OW2-88	<i>yes</i>	<i>locked</i>	<i>good</i>	<i>not visible</i>	

### 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	<i>yes</i>	<i>locked</i>	<i>good</i>	<i>Bad</i>	<i>lose from ground</i>
GW8A-93	<i>yes</i>	<i>locked</i>	<i>good</i>	<i>Bad</i>	<i>lose from ground</i>
GW8B-93	<i>yes</i>	<i>locked</i>	<i>good</i>	<i>good</i>	
GW9A-93	<i>yes</i>	<i>locked</i>	<i>good</i>	<i>Bad</i>	<i>lose from ground</i>
GW9B-93	<i>yes</i>	<i>locked</i>	<i>good</i>	<i>Bad</i>	<i>lose from ground</i>
GW11B-93	<i>yes</i>	<i>locked</i>	<i>good</i>	<i>good</i>	

## APPENDIX B - QUARTERLY GROUNDWATER WELL INSPECTION REPORT

### GRAFTECH WELLS

*December*

WELL I.D. NUMBER	WELL I.D. TAG INTACT (YES/NO)	LOCK CONDITION	OUTER CASING CONDITION	CONCRETE SEAL CONDITION	COMMENTS
MW1-78	<i>yes</i>	<i>locked</i>	<i>good</i>	<i>good</i>	
MW2-78	<i>yes</i>	<i>locked</i>	<i>good</i>	<i>good</i>	
MW3-79	<i>yes</i>	<i>locked</i>	<i>good</i>	<i>good</i>	
BW1-86	<i>yes</i>	<i>locked</i>	<i>good</i>	<i>good</i>	
BW2-86	<i>yes</i>	<i>locked</i>	<i>good</i>	<i>good</i>	
BW3-86	<i>yes</i>	<i>locked</i>	<i>good</i>	<i>not visible</i>	
BW4-86	<i>no</i>	<i>locked</i>	<i>good</i>	<i>good</i>	
BW5-86	<i>yes</i>	<i>locked</i>	<i>good</i>	<i>cracked</i>	
BW6-86	<i>yes</i>	<i>locked</i>	<i>good</i>	<i>cracked</i>	
WW1-86	<i>no</i>	<i>locked</i>	<i>good</i>	<i>not visible</i>	
OW1-88	<i>yes</i>	<i>locked</i>	<i>good</i>	<i>not visible</i>	
OW2-88	<i>yes</i>	<i>locked</i>	<i>good</i>	<i>not visible</i>	

### 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	<i>yes</i>	<i>locked</i>	<i>good</i>	<i>Bad</i>	<i>loose from ground</i>
GW8A-93	<i>yes</i>	<i>locked</i>	<i>good</i>	<i>Bad</i>	<i>loose from ground</i>
GW8B-93	<i>yes</i>	<i>locked</i>	<i>good</i>	<i>good</i>	
GW9A-93	<i>yes</i>	<i>locked</i>	<i>good</i>	<i>Bad</i>	<i>loose from ground</i>
GW9B-93	<i>yes</i>	<i>locked</i>	<i>good</i>	<i>Bad</i>	<i>loose from ground</i>
GW11B-93	<i>yes</i>	<i>locked</i>	<i>good</i>	<i>good</i>	

## APPENDIX B - QUARTERLY GROUNDWATER WELL INSPECTION REPORT

### GRAFTECH WELLS

December

WELL I.D. NUMBER	WELL I.D. TAG INTACT (YES/NO)	LOCK CONDITION	OUTER CASING CONDITION	CONCRETE SEAL CONDITION	COMMENTS
MW1-78	yes	locked	good	good	
MW2-78	yes	locked	good	good	
MW3-79	yes	locked	good	good	
BW1-86	yes	locked	good	good	
BW2-86	yes	locked	good	good	
BW3-86	yes	locked	good	not visible	
BW4-86	no	locked	good	good	
BW5-86	yes	locked	good	cracked	
BW6-86	yes	locked	good	cracked	
WW1-86	no	locked	good	not visible	
OW1-88	yes	locked	good	not visible	
OW2-88	yes	locked	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	locked	good	Bad	loose from ground
GW8A-93	yes	locked	good	Bad	loose from ground
GW8B-93	yes	locked	good	good	
GW9A-93	yes	locked	good	Bad	loose from ground
GW9B-93	yes	locked	good	Bad	loose from ground
GW11B-93	yes	locked	good	good	

Employee

Date

