

**UNITED STATES DISTRICT COURT
DISTRICT OF NORTH DAKOTA**

UNITED STATES OF AMERICA and
STATE OF NORTH DAKOTA,

Plaintiffs,

Civil Action No. 95-00141

v.

CITY OF MINOT,

Defendant.

SECOND MODIFICATION TO CONSENT DECREE

WHEREAS, the United States of America (“United States”), on behalf of the Administrator of the United States Environmental Protection Agency (“EPA”), the State of North Dakota (“State”), and the City of Minot (“City”) are Parties to a Consent Decree entered by the Court on February 7, 1996 (Dkt. No. 4), as modified by the Court on December 18, 1997 (Dkt. No. 6);

WHEREAS, the Consent Decree provides for the performance of response actions at the Old Minot Landfill Superfund Site in Minot, North Dakota (“Site”), as set forth in the Record of Decision issued by the EPA on June 21, 1993, as amended by the Explanation of Significant Differences issued by the EPA on April 10, 1996 (“ROD”);

WHEREAS, on March 13, 2018, the City requested the EPA modify the ROD and the Consent Decree to permit the City to re-purpose the Site for the following recreational uses: an 18-hole disc golf course, mountain-biking trails, and cross-country running trails;

WHEREAS, the EPA issued a second Explanation of Significant Differences on September 28, 2022 to modify the ROD to allow for the requested recreational uses at the Site;

WHEREAS, consistent with Section XXXII of the Consent Decree, the Parties now seek to modify the Consent Decree by this Second Modification to allow the City to re-purpose the Site for recreational uses consistent with the second Explanation of Significant Differences (September 28, 2022) while also protecting public health, welfare, and the environment through the maintenance of the City’s previous response action at the Site; and

WHEREAS, the Parties intend that this Second Modification shall replace only those provisions of the Consent Decree expressly referenced below, and all other provisions of the Consent Decree shall remain in force.

NOW, THEREFORE, it is hereby **ORDERED** as follows:

**I. MODIFICATIONS TO SECTION II:
JURISDICTION**

1. Section II, Paragraph 14 shall be amended by deleting the existing provision and replacing it with the following:

14. Jurisdiction. This Court has jurisdiction over the subject matter of this action under 28 U.S.C. §§ 1331 and 1345, and sections 106, 107 and 113(b) of CERCLA, and personal jurisdiction over the Parties. Venue lies in this District under section 113(b) of CERCLA and 28 U.S.C. §§ 1391(b), and 1395(a), because the Site is located in this judicial district. This Court retains jurisdiction over the subject matter of this action and over the Parties for the purpose of resolving disputes arising under the Consent Decree and this Second Modification, entering orders modifying the same, or effectuating or enforcing compliance with the same. The City may not challenge the terms of the Consent Decree, Second Modification, or this Court's jurisdiction to enter and enforce the same.

**II. MODIFICATIONS TO SECTION III:
PARTIES BOUND**

2. Section III, Paragraphs 15 and 16 shall be amended by deleting the existing provision and replacing it with the following:

15. The Consent Decree and this Second Modification are binding upon the United States, the State, and upon the City and successors. Unless the United States and the State otherwise consent, (i) any change in ownership or corporate or other legal status of the City, including any transfer of assets, or (ii) any Transfer of the Site or any portion thereof, does not alter any of the City's obligations under the Consent Decree or this Second Modification. The City's responsibilities under the Consent Decree and Second Modification cannot be assigned except under a modification executed in accordance with Section XXXII (Modification), below.

16. In any action to enforce the Consent Decree or this Second Modification, the City may not raise as a defense the failure of any of its officers, directors, employees, agents, contractors, subcontractors, or any person representing the City to take any action necessary to comply with the Consent Decree or this Second Modification. The City shall provide notice of the Consent Decree and this Second Modification to each person representing the City with respect to the Site or the Work. The City shall provide notice of the Consent Decree and this Second Modification to each contractor performing any Work and shall ensure that notice of the same is provided to each subcontractor performing any Work. With regard to the activities undertaken pursuant to the Consent Decree or this Second Modification, each contractor and subcontractor shall be deemed to be in a contractual relationship with the City within the meaning of Section 107(b)(3) of CERCLA, 42 U.S.C. § 9607 (b)(3).

**III. MODIFICATIONS TO SECTION IV:
DEFINITIONS**

3. Section IV, Paragraph 17 shall be amended by modifying the existing provision to include the following new defined terms and to modify the existing defined terms as follows:

17. Definitions. Terms used herein and defined in the Consent Decree shall have the meanings assigned in the Consent Decree. Whenever the terms set forth below are used herein, the following definitions shall apply:

“2022 ESD” means the Explanation of Significant Differences issued by the EPA on September 28, 2022, amending the ROD to modify certain land use restrictions at the Site and attached hereto as Appendix A.

“Consent Decree” means the Consent Decree, including its appendices, entered by the Court in this matter on February 7, 1996, as subsequently modified by the Court on December 18, 1997.

“Effective Date of this Second Modification” means the date upon which the Court’s approval of this Second Modification is recorded on its docket.

“Fund” means the Hazardous Substance Superfund established under section 9507 of the Internal Revenue Code, 26 I.R.C. § 9507.

“Future Response Costs” means all costs (including direct, indirect, payroll, contractor, travel, and laboratory costs) that the United States pays after the Effective Date of this Second Modification in implementing, overseeing, or enforcing the Second Modification, including: (i) in developing, reviewing and approving deliverables; (ii) in overseeing the City’s performance of the Work; (iii) in securing, implementing, monitoring, maintaining, or enforcing Institutional Controls, (iv) in taking response action because of the City’s failure to take emergency action under Paragraph 61 of the Consent Decree; (v) in conducting periodic reviews in accordance with section 121(c) of CERCLA.

“Interest” means interest at the rate specified for interest on investments of the Fund, as provided under section 107(a) of CERCLA, compounded annually on October 1 of each year. The applicable rate of interest will be the rate in effect at the time the interest accrues. The rate of interest is subject to change on October 1 of each year. As of the date of lodging of this Decree, rates are available online at <https://www.epa.gov/superfund/superfund-interest-rates>.

“Second Modification” means the Consent Decree as modified herein.

“State” means the North Dakota Department of Environmental Quality.

“Transfer” means to sell, assign, convey, lease, mortgage, or grant a security interest in, or where used as a noun, a sale, assignment, conveyance, or other disposition of any interest by operation of law or otherwise.

“Work” means all activities the City is required to perform under the Consent Decree and Second Modification, except for the payment of Response Costs under Section XVII of the Consent Decree and those required by Section XXVI (Retention of Records) of the Consent Decree.

**IV. MODIFICATIONS TO SECTION XXVII:
NOTICES AND SUBMISSIONS**

4. Section XXVII, Paragraph 109 shall be amended by deleting the existing provision and replacing it with the following:

109. Notices. All approvals, consents, deliverables, modifications, notices, notifications, objections, proposals, reports, waivers, and requests under the Consent Decree and this Second Modification must be in writing unless otherwise specified. Whenever a notice is required to be given or a report or other document is required to be sent by one party to another, it must be sent as specified below. All notices under this paragraph are effective upon receipt, unless otherwise specified. In the case of emailed notices, there is a rebuttable presumption that such notices are received on the same day that they are sent. Any party may change the method, person, or address applicable to it by providing notice of such change to all Parties.

As to DOJ:

via email to:
EES Case Management Unit
U.S. Department of Justice
Environment and Natural Resources Division
U.S. Department of Justice
P.O. Box 7611
Washington, D.C. 20044-7611
eescdcopy.enrd@usdoj.gov
Re: DJ # 90-11-3-1107

As to EPA:

via email to:
Rebecca Geyer
EPA Remedial Project Manager
U.S. Environmental Protection Agency
Region 8
1595 Wynkoop Street
Denver, CO 80209
geyer.rebecca@epa.gov
Re: Site/Spill ID # 08-F2

As to the Regional
Financial Management
Officer: *via email to:*
Davionn Johnson
U.S. Environmental Protection Agency
Region 8
1595 Wynkoop Street
Denver, CO 80202-1129
johnson.davionn@epa.gov
Re: Site/Spill ID #08-F2

As to EPA Cincinnati
Finance Center: *via email to:*
EPA Cincinnati Finance Center
26 W. Martin Luther King Drive
Cincinnati, Ohio 45268
cinwd_acctsreceivable@epa.gov

As to *via email to:*
Solid Waste Program Manager
North Dakota Department of Environmental Quality
4201 Normandy Street
Bismarck, ND 58503-1324
solidwaste@nd.gov

As to the City: *via email to:*
Utilities Director
City of Minot
PO Box 5006
Minot, ND 58702
pw@minotnd.gov

V. MODIFICATIONS TO SECTION XXXII MODIFICATION

5. Section XXXII shall be amended by deleting the existing provisions therein and replacing it with the following:

114. Non-material modifications to the Consent Decree and the Second Modification, including their Appendices, must be in writing and are effective when signed (including electronically signed) by duly authorized representatives of the Parties. Material modifications to the Consent Decree and the Second Modification, including their Appendices, must be in writing, signed (including electronically signed) by duly authorized representatives of the Parties, and are effective upon approval by the Court. A modification is considered material if it implements an amendment to the Record of Decision that “fundamentally alter the basic features” of the Remedial Action within the meaning of 40 C.F.R. § 300.435(c)(2)(ii).

VI. MISCELLANEOUS TERMS

6. Modified Statement of Work.

a. The Statement of Work attached to the Consent Decree is modified to reflect the Operation and Maintenance Plan (O&M Plan), approved on May 7, 2025 and attached hereto as Appendix B. This O&M Plan supersedes and replaces the Monitoring, Operations, and Contingency Plan, dated October 1996, that was prepared by Wenck Associates, Inc. The City will finance, implement, operate, maintain, and monitor the effectiveness of the Remedial Action in accordance with the O&M Plan, the modified Statement of Work attached hereto as Appendix C, and all EPA-approved, conditionally approved, or modified deliverables as required by this Second Modification.

b. Section 3.11 of the Statement of Work is also modified to accommodate access and allow recreational uses of the Site consistent with the 2022 ESD, as shown in Appendix C.

7. Deliverables.

a. If the City decides to repurpose the Site for recreational uses consistent with the 2022 ESD, it shall do so in accordance with the Statement of Work, as modified herein, and the deliverables identified below.

b. The City shall submit the following deliverables to the EPA for review, comment, approval, modification, disapproval, or any combination of the foregoing:

Description	Deadline
Initial Draft of Reuse Work Plan	Within 60 days of the Effective Date of this Second Modification
Initial Draft of Health and Safety Plan (HASP)	Within 90 days of the Effective Date of this Second Modification
Initial Draft of Quality Assurance Project Plan (QAPP) with completed QAPP crosswalk.	Within 150 days of the Effective Date of this Second Modification
Initial Draft of Revised City Ordinance No. 3406	Within 180 days of the Effective Date of this Second Modification
Initial Draft of Environmental Covenant	Within 210 days of the Effective Date of this Second Modification

c. The City shall submit the deliverables to the EPA by the deadlines set forth above. The City shall submit all deliverables in electronic form. The City shall submit deliverables in paper form if unable to submit electronically. If any deliverable includes maps,

drawings, or other exhibits that are larger than 8.5 x 11 inches, the City shall also provide EPA paper copies of such exhibits. The City shall not submit deliverables to EPA that are marked as “copyright,” “trademark,” or “confidential”, as the deliverables are part of the administrative record for the Site and as such are available to the public. The City may submit proposed revised schedules for EPA approval. Any revised schedules approved by EPA shall become the new enforceable deadline under this Second Modification, subject to Stipulated Penalties in Paragraph 10 below. Upon its written approval by EPA, each deliverable shall be incorporated into and become enforceable under this Second Modification.

d. The City shall develop the HASP in accordance with EPA’s *Emergency Responder Health and Safety Manual* and Occupational Safety and Health Administration (“OSHA”) requirements under 29 C.F.R. §§ 1910 and 1926. The HASP should cover the onsite redevelopment activities. The EPA does not approve the HASP but will review it to ensure that all necessary elements are included and that the plan provides for the protection of human health and the environment.

e. The City shall meet all quality assurance requirements defined in the EPA IT/IM Directives Environmental Information Quality Policy (CIO 2105, current version) and Environmental Information Quality Procedure, (CIO 2105-P-01, current version) available at <https://www.epa.gov/irmpoli8/environmental-information-quality-policy>. Prior to beginning any Environmental Information Operations (“EIO”), as defined in EPA IT/IM Quality Assurance Project Plan Standard (CIO 2105-S-02 [QA/S-2], current version) (“QAPP Standard”), the City shall develop a Quality Assurance Project Plan (“QAPP”) that meets the minimum requirements in accordance with the QAPP Standard. All technical Standard Operating Procedures, field forms, chains of custody, laboratory accreditation and QA manuals, and other supporting documents must be attached to the QAPP and submitted for EPA review and approval. Any review or use of existing information is considered secondary use of existing information and must be incorporated into a QAPP that is approved by the EPA. A completed EPA Region 8 QAPP crosswalk must be submitted to EPA for review and approval with all QAPPs. The QAPP crosswalk may be found at EPA Region 8’s QA website: <https://www.epa.gov/quality/managing-quality-environmental-data-epa-region-8>.

f. QAPPs are valid for up to 5 years as long as there are no significant changes. The City must complete and document annual reviews of QAPPs on the Region 8 QAPP Crosswalk and note whether changes are significant or not. Significant changes and QA documents greater than 5 years old from the date of EPA QA approval require the City to re-submit the QA documents and completed Crosswalks for EPA’s review and re-approval.

g. The City shall ensure that the EPA’s and State’s personnel and their authorized representatives are allowed access at reasonable times to properties for field sampling and oversight. The City shall ensure that laboratories it selects analyze all samples in accordance with the approved QAPP. The City shall ensure that the laboratories it selects for the analysis of samples taken under this Second Modification meet the competency requirements set forth in the Policy to Assure Competency of Laboratories, Field Sampling, and Other Organizations Generating Environmental Measurement Data under Agency-Funded Acquisitions, Directive No. FEM-2011-01 available at <https://www.epa.gov/measurements/documents-about-measurement-competency-under-acquisition-agreements> and that the laboratories perform all

analyses according to EPA-accepted methods. Accepted EPA methods are documented on the EPA's "Superfund Contract Laboratory Program" website at <https://www.epa.gov/clp>, the "Hazardous Waste Test Methods / SW 846" website (Test Methods for Evaluating Solid Waste, Physical/Chemical Methods) at <https://www.epa.gov/hw-sw846>, the "Standard Methods for the Examination of Water and Wastewater" website at <https://www.standardmethods.org/>, and the "Air Toxics - Monitoring Methods" (40 C.F.R. part 136) website at <https://www3.epa.gov/ttnamtl/airtox.html>.

h. Upon request, the City shall provide split or duplicate samples to EPA or its authorized representatives. All split or duplicate sampling must be described in an EPA-approved QAPP. In addition, EPA may take any additional samples that EPA deems necessary. Upon request, EPA may provide the City with split and/or duplicate samples of any samples in connection with EPA's oversight sampling. For split or duplicate soil samples, co-located field duplicates shall be collected by taking two separate samples.

i. All deliverables required herein, except for the Revised City Ordinance No. 3406 and the Environmental Covenant, must be signed (which may include electronically signed) by the City's Utilities Director, or other responsible official of the City, and shall contain the following statement:

I certify under penalty of perjury that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I have no personal knowledge that the information submitted is other than true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

j. All deliverables (including work plans, reports, samples taken, and analyses conducted, electronic data (including monitoring data, quality assurance data, spatial data and metadata) required to be submitted by the City under this Second Modification shall be performed and prepared consistent with applicable EPA guidance. The City will assure that field personnel used by the City are properly trained in the use of field equipment and in chain of custody procedures. The City shall only use laboratories that are accredited for the specific analytical test methods performed by the laboratory.

k. Unless otherwise directed by EPA, the City shall not commence physical on-site activities for repurposing the Site for recreational uses prior to the EPA's approval of the City's Reuse Work Plan, QAPP, Revised City Ordinance No. 3406, Environmental Covenant, except for the existing and ongoing operations and maintenance responsibilities currently required under the Consent Decree. Prior to any recreational use of the Site, all of these deliverables must be approved by the EPA in writing.

8. Copies of Deliverables to State.

a. The City shall, at any time it sends a deliverable to the EPA, send a copy of such deliverable to the State. The EPA shall, at any time it sends a notice, authorization, approval, disapproval, or certification to the City, send a copy of such document to the State.

b. The EPA will provide the State with an opportunity for review and comment of any deliverables required under Paragraph 7 (Deliverables) and will consult with the State before issuing any approval or disapproval.

9. Payments by City for Future Response Costs.

a. On a periodic basis, EPA will send the City a bill for Future Response Costs, including a standard cost summary listing direct and indirect costs paid by EPA, its contractors, subcontractors, and the United States Department of Justice (“DOJ”). The City may initiate a dispute under Section XX of the Consent Decree regarding a Future Response Cost billing, but only if the dispute relates to one or more of the following issues: (i) whether EPA has made an arithmetical error; (ii) whether EPA has included a cost item that is not within the definition of Future Response Costs; or (iii) whether EPA has paid excess costs as a direct result of an EPA action that was inconsistent with a specific provision or provisions of the NCP. The City must specify in the written Notice of Dispute the contested costs and the basis for the objection.

b. The City shall pay the bill, or if it initiate dispute resolution, the uncontested portion of the bill, if any, within 30 days after receipt of the bill. The City shall pay the contested portion of the bill determined to be owed, if any, within 30 days after the determination regarding the dispute. Each payment for: (i) the uncontested bill or portion of bill, if late, and; (ii) the contested portion of the bill determined to be owed, if any, must include an additional amount for interest accrued from the date of receipt of the bill through the date of payment. The City shall make payment at <https://www.pay.gov> using the “EPA Miscellaneous Payments Cincinnati Finance Center” link and including references to the Site/Spill ID and DJ numbers listed in Paragraph 109 of the Consent Decree, as modified by this Second Modification, and the purpose of the payment. The City shall send notices of this payment to the DOJ and the EPA in accordance with Paragraph 109 of the Consent Decree, as modified by this Second Modification.

10. Stipulated Penalties.

a. Unless the noncompliance is excused under Section XIX (Force Majeure) of the Consent Decree, the City is liable to the United States for the following stipulated penalties for any failure to submit timely or adequate deliverables under Paragraph 7 of this Second Modification:

Period of Noncompliance	Penalty Per Noncompliance Per Day
1st through 14th day	\$5,000
15th through 30th day	\$7,500
31st day and beyond	\$10,000

b. Stipulated penalties accrue from the date performance is due, or the day a noncompliance occurs, whichever is applicable, until the date the requirement is completed or the final day of the correction of the noncompliance. Nothing in this Second Modification prevents the simultaneous accrual of separate penalties for separate noncompliances with this Second Modification. Stipulated penalties accrue regardless of whether the City has been notified of noncompliance, and regardless of whether the City initiated dispute resolution under Section XX of the Consent Decree.

c. EPA may send the City a demand for stipulated penalties. The demand will include a description of the noncompliance and will specify the amount of the stipulated penalties owed. The City may initiate dispute resolution under Section XX of the Consent Decree within 30 days after receipt of the demand. The City shall pay the amount demanded or, if initiate dispute resolution, the uncontested portion of the amount demanded, within 30 days after receipt of the demand. The City shall pay the contested portion of the penalties determined to be owed, if any, within 30 days after the resolution of the dispute. Each payment for: (a) the uncontested penalty demand or uncontested portion, if late; and (b) the contested portion of the penalty demand determined to be owed, if any, must include an additional amount for Interest accrued from the date of receipt of the demand through the date of payment. The City shall make payment at <https://www.pay.gov> using the link for "EPA Miscellaneous Payments Cincinnati Finance Center," including references to the Site/Spill ID and DJ numbers listed in Paragraph 109 of the Consent Decree, as modified by this Second Modification, and the purpose of the payment. The City shall send a notice of this payment to DOJ and EPA. The payment of stipulated penalties and Interest, if any, does not alter any obligation by the City under this Second Modification.

d. Nothing in this Second Modification limits the authority of the United States: (a) to seek any remedy otherwise provided by law for the City's failure to pay stipulated penalties or interest; or (b) to seek any other remedies or sanctions available by virtue of the City's noncompliances with this Second Modification or of the statutes and regulations upon which it is based, including penalties under section 122(f) of CERCLA, provided, however, that the United States may not seek civil penalties under section 122(f) of CERCLA for any noncompliance for which a stipulated penalty is provided for in this Second Modification, except in the case of a willful noncompliance with this Second Modification.

e. Notwithstanding any other provision of this Paragraph 10, the United States may, in its unreviewable discretion, waive any portion of stipulated penalties that have accrued under this Second Modification.

11. Appendices. The following appendices are attached to and incorporated into this Second Modification:

Appendix A is the 2022 ESD
Appendix B is the O&M Plan
Appendix C is the modified Statement of Work

12. Signatories. The undersigned representative of the United States, the undersigned representative of the State, and undersigned representative of the City certifies that he or she is

fully authorized to enter into the terms and conditions of this Second Modification and to execute and legally bind such Party to this document.

13. Pre-Entry Provisions.

a. If for any reason the Court should decline to approve Second Modification in the form presented, this agreement, except for Paragraphs 13.b. and 13.c, is voidable at the sole discretion of any Party and its terms may not be used as evidence in any litigation between the Parties.

b. This Second Modification will be lodged with the Court for at least 30 days for public notice and comment in accordance with section 122(d)(2) of CERCLA and 28 C.F.R. § 50.7. The United States may withdraw or withhold its consent if the comments regarding the Second Modification disclose facts or considerations that indicate that the Second Modification is inappropriate, improper, or inadequate.

c. The City agrees not to oppose or appeal the entry of this Second Modification.

14. Limitations. Except as modified herein, the Consent Decree remains unchanged and in full force and effect.

15. Final Judgment. Upon entry of this Second Modification by the Court, this Second Modification constitutes a final judgment under Fed. R. Civ. P. 54 and 58 among the Parties.

SO ORDERED THIS __ DAY OF _____, 202_.


United States District Judge

Signature Pages for Second Modification in *U.S. and State of North Dakota v. City of Minot*
(D.N.D.):

FOR: The United States of America

ADAM R.F. GUSTAFSON
Principal Deputy Assistant Attorney General
Environment and Natural Resources Division

3/5/26
Dated


JOHN SITHER
Senior Counsel
Environmental Enforcement Section
U.S. Department of Justice
P.O. Box 7611, Ben Franklin Station
Washington, DC 20044-7611
Telephone: (202) 514-5484
Fax: (202) 514-0097
Email: John.Sither@usdoj.gov

**FOR: United States
Environmental Protection Agency
Region 8**

**CYRUS
WESTERN**

Digitally signed by
CYRUS WESTERN
Date: 2025.12.15
11:37:04 -07'00'

Dated

CYRUS M. WESTERN
Regional Administrator
U.S. Environmental Protection Agency, Region 8
1595 Wynkoop Street
Denver, Colorado 80202

**KENNETH
SCHEFSKI**

Digitally signed by
KENNETH SCHEFSKI
Date: 2025.12.10
10:59:19 -07'00'

Dated

KENNETH C. SCHEFSKI
Regional Counsel
U.S. Environmental Protection Agency, Region 8
1595 Wynkoop Street
Denver, Colorado 80202

**AARON
URDIALES**

Digitally signed by
AARON URDIALES
Date: 2025.12.11
11:42:31 -07'00'

Dated

AARON URDIALES
Division Director
Superfund and Emergency Response Division
U.S. Environmental Protection Agency, Region 8
1595 Wynkoop Street
Denver, Colorado 80202

FOR: The State of North Dakota

11/21/2025
Dated



L. DAVID GLATT, P.E.
Director
Department of Environmental Quality
4201 Normandy St.
Bismarck, ND 58503

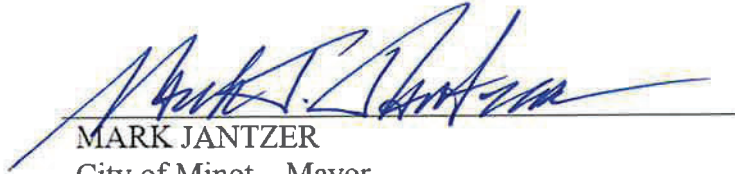
11/21/2025
Dated



ERIK WALLEVAND
Assistant Attorney General
Office of Attorney General
500 North 9th Street
Bismarck, ND 58501-4509

FOR: The City of Minot

April 7, 2026
Dated


MARK JANTZER
City of Minot – Mayor
PO Box 5006
Minot, ND 58702

Appendix A

Explanation of Significant Differences (September 28, 2022)



100012241

**EXPLANATION OF SIGNIFICANT DIFFERENCES
MINOT LANDFILL SUPERFUND SITE
MINOT, NORTH DAKOTA**

I. Introduction

This Explanation of Significant Differences (ESD) presents the details of a second change to the remedy selected in the June 21, 1993, Record of Decision (ROD) for the Minot Landfill Superfund Site (Site). The first remedy change consisted of an April 10, 1996, Explanation of Significant Differences (ESD).

The remedy was considered fully implemented in September 1996 and deleted from the National Priorities List (NPL) in April 1997.

This ESD documents the decision to allow the existing remedy to be modified to support recreational use on and adjacent to the landfill cap.

The 26-acre Site is located in a deep ravine in a rural residential and commercial area about one mile southwest of downtown Minot in Ward County, North Dakota (Figure 1). The Site is known locally as the closed "Old Minot Landfill" to differentiate it from the local active landfill. The Site is situated 2,000 feet south of the Souris River and east of the intersection of the Burdick Expressway and the combined U.S. Highway 2 and 52 Bypass. A housing development is located next to the northeastern fence line of the Site (Figure 1). Commercial businesses, including the Maysa Arena (an ice rink), border the west side of the landfill. Another ravine located immediately northwest of the Site, and between the Site and the Maysa Arena, contains a closed landfill of construction and demolition debris. The Minot Fire Department has constructed a fire training facility at the southwest entrance of the Site immediately outside of the landfill footprint. Agricultural areas are located southwest of the Site. The entire Site is covered in grass. There are a few trees around the perimeter of the cap; however, there are no trees or structures on the cap.

The EPA is the lead agency for oversight of the investigations, feasibility studies, remedial designs, remedial actions and operation and maintenance. The North Dakota Department of Environmental Quality (NDDEQ), formerly known as the North Dakota Department of Health (NDDH), is the support agency for this project.

This ESD is issued in accordance with Section 117(c) of the Comprehensive Environmental Response, Compensation, and Liability Act, as amended, (CERCLA), 42 U.S.C. 9617(c) and the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), Section 300.435(c)(2)(i). The changes described in this ESD significantly change, but do not fundamentally alter, the remedy selected in the ROD with respect to scope, performance, or cost of the selected remedy.

This document will be incorporated into the Administrative Record maintained for this Site, as required by NCP Section 300.825(a)(2). This Administrative Record is available for review at:

Minot Public Library
516 2nd Ave SW
Minot, North Dakota 58701
701-852-1045

The Administrative Record is also available for review by appointment at:

EPA Region 8 Records Center
1595 Wynkoop Street
Denver, Colorado 80202-2466
303-312-6473

This ESD and its supporting documentation will be available for public review at these locations and a notice containing a brief summary of the action will be published in a local newspaper, as required by NCP Section 300.435(c)(2)(i)(A) & (B). The ESD will also be available on the EPA site profile page at <https://www.epa.gov/superfund/minot-landfill>.

II. Site History

The City of Minot operated a landfill at the Site from 1961 to October 1971. The Site property has had several owners since 1961 though the past owners were not involved in operating the on-site facility. Although the exact composition of wastes disposed of at the Site is not known, refuse included drums of oil, spent battery casings, calcium carbide and lime sludge. Discussions with past landfill operators indicated that refuse was received from the City of Minot, other neighboring towns, farms, industries and military sites and was covered daily with about 6 inches of clay-rich soil.

The City closed the landfill in the fall of 1971. Closure included covering the refuse with about 3 feet of clay material from the valley walls, which was then seeded. In mid-1985, Ward County's First District Health Unit (FDHU) received a complaint of gas bubbles escaping from the surface of the Site. After inspecting the Site, FDHU contacted NDDH's Environmental Health Section regarding observations of foul odors, gas bubbles in standing water and water drainage from waste. NDDH conducted an inspection in June 1985. NDDH arranged a meeting at the Site in late summer with the City and the landowners and requested that the previous landowners control surface water drainage, repair eroded channels and install a gas venting system. NDDH contacted EPA's Region 8 office to discuss the investigative approach for the Site.

Preliminary investigations by EPA in 1986 found that soil, groundwater, surface water, sediment and landfill gases at the Site were contaminated. The EPA proposed the Site for listing on the Superfund program's NPL on June 24, 1988. The EPA finalized the listing on March 31, 1989. In December 1989, the City of Minot initiated a removal action that included installing a perimeter fence around the landfill, construction of surface runoff/erosion controls (including

swales and storm sewer piping) and seeding of areas disturbed by construction and exposed slopes on the hills along the southern edge of the Site. In 1990, the City performed additional work to repair drainage ditches and swales to complete the removal action.

The EPA issued a Unilateral Administrative Order and Statement of Work to the City of Minot in September 1990 to complete a remedial investigation and feasibility study (RI/FS) for the Site. The City retained a contractor to complete the RI/FS in 1992.

The EPA issued a ROD for the Site on June 21, 1993. The major components of the selected remedy were:

- “Institutional controls to prohibit construction on the landfill, or the use of water beneath the landfill or in the immediate vicinity of the landfill for drinking water purposes.
- Leachate extraction and treatment in the City of Minot wastewater treatment facility.
- Consolidation of contaminated soil in the vicinity of leachate seeps under the cap, and cap improvements to limit precipitation infiltration and control stormwater runoff.
- Groundwater monitoring to allow detection of future releases of contaminants to the ground water.
- Landfill gas collection using an active collection system and a tall stack for dispersion venting. EPA may modify the system design to accomodata site conditions, following installation of the leachate collection system.”

An April 10, 1996, ESD modified the 1993 ROD as follows:

- “A passive gravity drain system will replace the proposed active leachate extraction system. This passive system will be more cost effective while achieving the same goal of managing leachate levels in the landfill to prevent leachate seeps through the cap and to reduce the potential for leachate migration from the landfill in the groundwater.
- “To clarify the cap design, the 3-foot clay cap specified in the ROD performance standard will actually be 18 inches of clay, 12 inches of root zone material and 6 inches of topsoil.
- “Passive gas vents will replace the proposed active gas extraction system and tall stack. The gas vents will be more cost effective while achieving the same goal of controlling the landfill gas to reduce pressures in the landfill that can damage the fill cap and can increase the potential for leachate migration.
- “The limits of buried waste have been extended based on geophysical survey investigation information conducted in May 1993.”

In the Site’s 1996 Consent Decree, the City agreed to perform the remedial design and remedial action and operation and maintenance (O&M) activities at the Site. The City completed the

remedial design between February 1996 and April 1996. The City completed the remedial action between June 1996 and November 1996. It included the following activities:

- Completion of several test pit excavations to verify the presence of waste and determine its configuration.
- Installation of a passive leachate collection system within the landfill and associated drainage system that discharges to the City's wastewater treatment facility.
- Installation of riser pipes extending upward from the leachate drain to serve as passive gas vents and cleanouts.
- Installation of removable wind turbines at the top of each riser pipe to help remove the gas from the landfill by inducing a vacuum.
- Excavation of identified waste and placement of the material under a new cap.
- Construction of a cap, consisting of 18 inches of clay, 12 inches of root zone material and 6 inches of topsoil, to cover the limits of buried waste.
- Site seeding and fertilization.
- Replacement of the existing silt fence around catch basins with riprap.
- Installation of erosion matting in the swales between catch basins, in perimeter ditches and in the cap improvement area.
- Installation of a permanent fence surrounding the landfill.
- Installation of seven groundwater monitoring wells and four piezometers around the perimeter of the landfill.
- Disposal of leachate in the wells during abandonment in the City's municipal sanitary sewer system.
- Implementation of institutional controls via local land use ordinances restricting activities that could damage the landfill cap and prohibiting installation of groundwater supply wells in or in the immediate vicinity of the landfill.

The EPA and NDDH concluded that the remedial action had been implemented successfully. The EPA issued the Site's Final Close-Out Report in December 1996. The EPA deleted the Site from the NPL in April 1997 with State concurrence. O&M activities are on-going.

The fifth five-year review report was signed on July 29, 2021. This review found that the remedy is protective of human health and the environment in the short-term because contaminated source material has been excavated and contained on Site beneath a landfill cap. The institutional control is in place to prevent future land uses that could damage the remedial components in place and to prohibit installation of groundwater supply wells on the Site or in the immediate vicinity of the Site. Also, long-term monitoring results demonstrate that COCs consistently meet performance objectives in groundwater and people are not using groundwater at the Site or in the area surrounding the Site. It was determined that for the remedy to be protective over the long term, the City should evaluate the monitoring data and determine the source of the elevated vinyl chloride in OW-103A. Additionally, the City should improve the detection limits for chromium analysis in groundwater samples since the detection limit in many of the monitoring wells consistently exceeds the cleanup goal.

III. Basis for this ESD

The Minot Park District, which operates the adjacent Maysa Arena, has proposed re-using the Site for recreational use. The Minot Park District is the unit of the Minot, North Dakota, municipal government responsible for maintaining city parks. On March 13, 2018, the City of Minot requested that the EPA and North Dakota Department of Environmental Quality consider modifying the Superfund remedy and the legal agreement to allow for this change. The Minot Park District proposal includes an 18-hole disc golf course, mountain biking trails and cross-country running trails on and adjacent to the landfill cap.

IV. Description of Significant Differences

This ESD documents the decision to allow the existing remedy to be modified to support recreational use on and adjacent to the landfill cap. This ESD includes the following:

- a. Modification to the existing institutional controls to allow for recreational use as well as refining the extent of the institutional controls while continuing to protect the landfill cap and other portions of the remedy. Additionally, North Dakota recently passed the Uniform Environmental Covenants Act, and it or other institutional controls may be used to add additional protective institutional control layer(s). The prohibition on the installation of groundwater supply wells is retained.
- b. Minor modifications to portions of the Site remedy to allow for recreational use including modifications to fencing, access, gas venting system and drainage patterns. The Minot Park District will provide an O&M Plan for EPA and the North Dakota Department of Environmental Quality's review and approval to ensure that the remedy remains protective of human health and the environment.

There are no applicable or relevant and appropriate federal and state requirements (ARARs) specific to the modifications in this ESD.

The capital cost of this ESD is estimated to be \$3,000.

V. Support Agency Comments

The State of North Dakota concurs with this ESD.

VI. Statutory Determinations

In accordance with CERCLA Section 121, 42 U.S.C. § 9621, the EPA believes that this action is protective of human health and the environment, complies with Federal and State requirements that are applicable or relevant and appropriate to the remedial action. This ESD makes no changes to the remedy's use of permanent solutions and alternative treatment (or resource recovery) technologies to the maximum extent practicable.

Because this action will result in hazardous substances, pollutants, or contaminants remaining on-site above levels that allow for unlimited use and unrestricted exposure, a statutory review will continue to be conducted within five years after the remedial action to ensure that the remedy is, or will be, protective of human health and the environment. The most recent five-year review was completed on July 29, 2021.

VII. Public Participation Requirements

This ESD and its supporting documentation will be available for public review at these locations and a notice containing a brief summary of the action will be published in a local newspaper, as required by NCP Section 300.435(c)(2)(i)(A) & (B).

The public participation requirements set out in NCP section 300.435(c)(2)(i)(A)&(B) have been met.

AUTHORIZING SIGNATURE

This Explanation of Significant Differences (ESD) documents the second modification to the 1993 Record of Decision for the Minot Landfill site.

The following authorized official at EPA Region 8 approves the modification as described in this ESD.

**BETSY
SMIDINGER**

Digitally signed by BETSY
SMIDINGER
Date: 2022.09.28 16:34:20 -06'00'

Betsy Smidinger, Director
Superfund and Emergency Management Division

This Explanation of Significant Differences (ESD) documents the second modification to the 1993 Record of Decision for the Minot Landfill site.

The following authorized official at the State of North Dakota concurs with the modification as described in this ESD.



L. David Glatt, Director
North Dakota Department of Environmental Quality

10.7.2022

Date

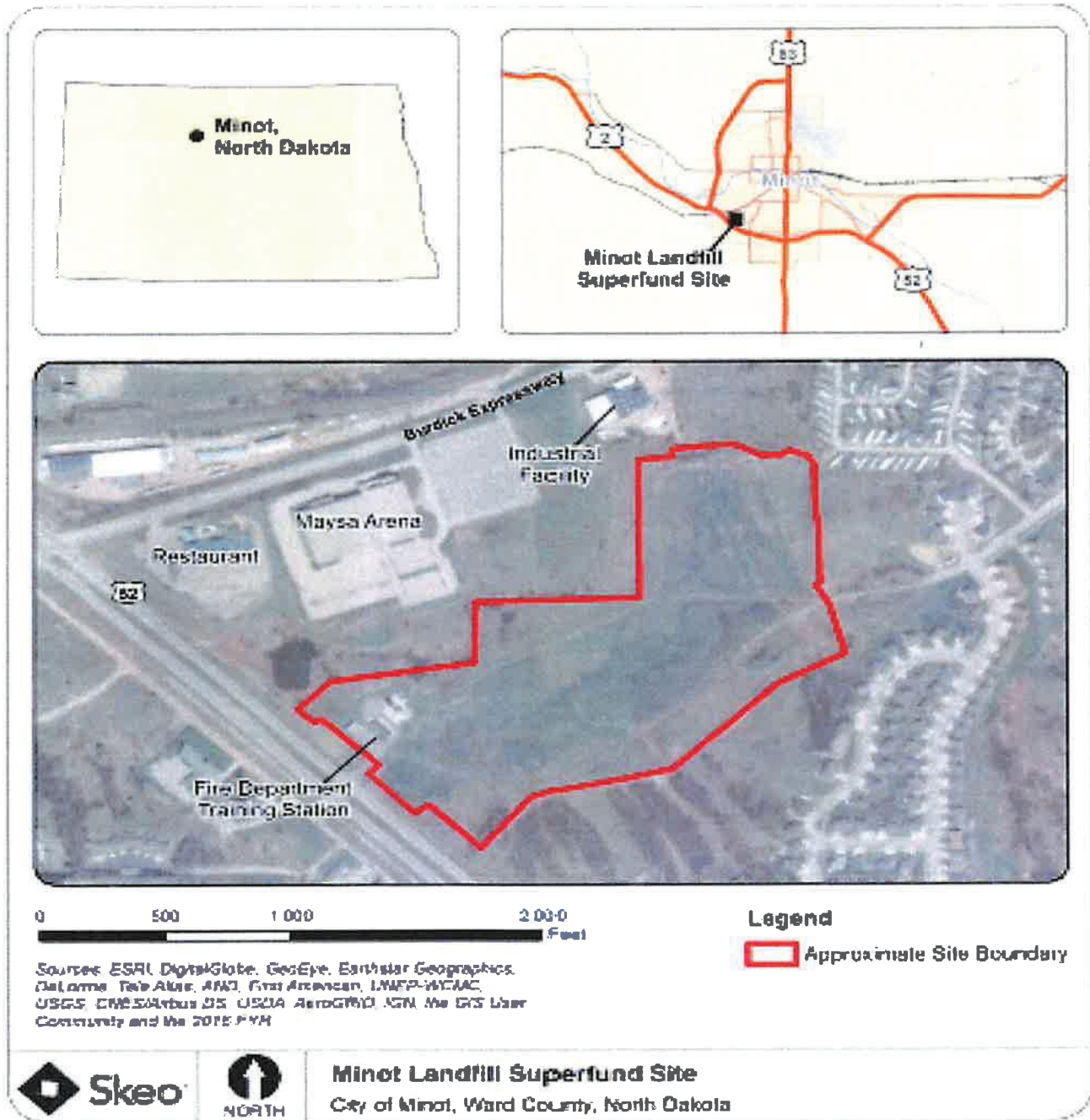


Figure 1

Disclaimer: This map and any boundary lines within the map are approximate and subject to change. This map and any boundary lines within the map are approximate and subject to change. The map is not a survey. The map is for informational purposes only regarding EPA's response actions at the Site.

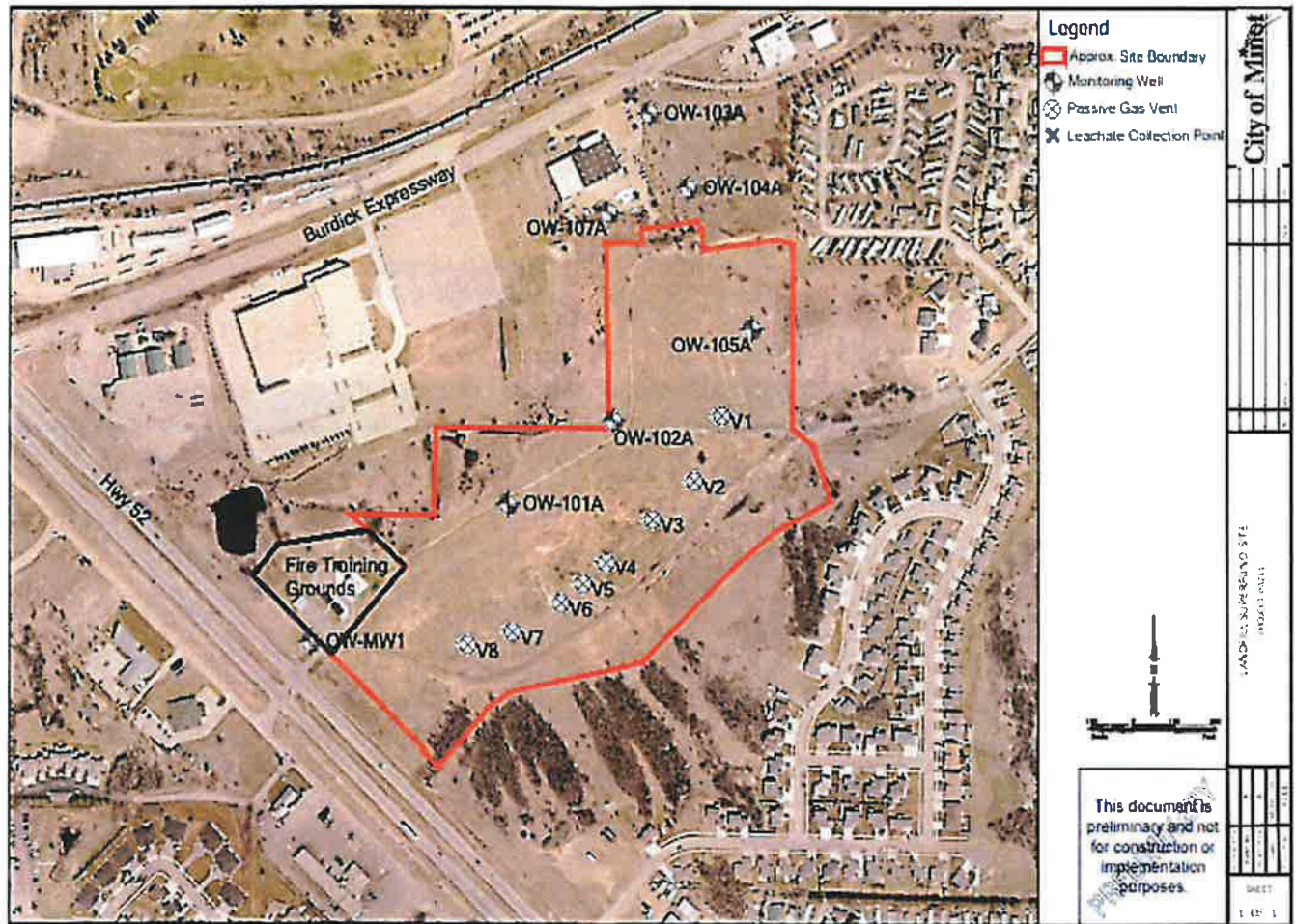


Figure 2 - Map of Area requiring Institutional Controls

Appendix B
Operation and Maintenance Plan (O&M Plan)

OPERATIONS AND MAINTENANCE PLAN OLD MINOT LANDFILL SUPERFUND SITE

Section 27, Township 155 North, Range 83 West
Ward County, North Dakota

City of Minot, ND

February 2025



CPS, Ltd.

308 2nd Avenue North
Grand Forks, ND 58203

(701) 746-7459

www.cpsengineering.net



**Operations and Maintenance Plan
Old Minot Landfill Superfund Site**

City of Minot, ND
CPS, Ltd.

OPERATIONS AND MAINTENANCE PLAN OLD MINOT LANDFILL SUPERFUND SITE

**Section 27, Township 155 North, Range 83 West
Ward County, North Dakota**

Prepared by The City of Minot, ND
With Assistance from CPS, Ltd.
City Project No. 3700.1
CPS Project No. 24301

Minot Public Works Street Address:

1025 31st Street Southeast Minot, North Dakota 58701

Minot Public Works Mailing Address:

P.O. Box 5006 Minot, North Dakota 58702-5006

FEBRUARY 2025



TABLE OF CONTENTS

1.00 BACKGROUND 1

1.01 SITE LOCATION 1

1.02 POINT OF CONTACT.....2

1.03 HISTORICAL DEVELOPMENT OF SITE OPERATION & MAINTENANCE REQUIREMENTS ...2

1.04 ENFORCEMENT3

1.05 PROPOSED SITE REUSE AND DEVELOPMENT3

1.06 OPERATION AND MAINTENANCE PLAN OBJECTIVES5

1.07 RECORDKEEPING AND REPORTING.....7

2.00 FACILITY OPERATION, MAINTENANCE, MONITORING AND REPORTING 8

2.01 RESPONSIBILITY FOR COMPLIANCE8

2.02 SITE ACCESS AND SECURITY8

2.03 HEALTH AND SAFETY9

2.04 GENERAL FACILITY INSPECTION, MAINTENANCE AND REPORTING9

2.05 LANDFILL CAP MANAGEMENT 11

2.06 LEACHATE MANAGEMENT..... 12

2.07 LANDFILL GAS MANAGEMENT 13

2.08 GROUNDWATER QUALITY20

3.00 CONTINGENCY PLAN 26

3.01 GENERAL.....26

3.02 EMERGENCY SERVICES26

3.03 POTENTIAL CONTINGENCIES.....27

3.04 CORRECTIVE ACTIONS32

3.05 CONTINGENCY REPORTING38

3.06 AMENDMENT OF CONTINGENCY PLAN38

4.00 REFERENCES..... 39



LIST OF FIGURES INCLUDED IN THE REPORT TEXT

Figure 1.01 Site Location..... 1
Figure 1.05a: 2023 Workplan Disc Golf Course Layout.....4
Figure 1.05b: 2023 Workplan Cross Country Course System Layout4
Figure 1.05c: 2023 Workplan Mountain Biking Trail System Layout5
Figure 2.02: 2023 Workplan Proposed Fence Openings8
Figure 2.05b: Surface Water Controls 12
Figure 2.06: Leachate Drain..... 13
Figure 2.07a: Passive Gas Vent Locations 14
Figure 2.08b.1: Groundwater Monitoring Wells.....20
Figure 2.08b.2: Groundwater Well Static Water Level Piezometric Contours..... 21
Figure 2.08c: Leachate Sampling Location.....25
Figure 3.04: FEMA FIRM and Floodplain Data 34

LIST OF TABLES INCLUDED IN THE REPORT TEXT

Table 1.03: Elements of Selected Remedy from 1993 EPA Record of Decision (ROD) 3
Table 1.06: Remediation Goals and Performance Standards from the Record of Decision (ROD) signed June 21, 1993 6
Table 1.07b: Schedule Summary of Site Monitoring, Inspections, and Reporting.....7
Table 2.04.a: Maintenance Schedule9
Table 2.04b.1: Park District Monthly Site Inspection Category List..... 10
Table 2.04b.2: City of Minot Site Inspection Category List and Schedule 10
Table 2.07b.1: Federal and North Dakota State Ambient Air Quality Standards..... 15
Table 2.07b.2: Explosive Limits of Common Landfill Gas Components..... 17
Table 2.07b.3: Weather Data Verification for Gas Monitoring 18
Table 2.07b.4: Gas Monitoring Parameters..... 19
Table 2.08b.1: Groundwater Monitoring Well Locations 21
Table 2.08b.2: Groundwater Monitoring Well and Piezometer Functions22
Table 2.08c: Groundwater Quality Analytical Parameters, Methods, and Standards 23
Table 3.03a: Event-Triggered Contingencies.....27
Table 3.03b: Inspection-Triggered Contingencies 29
Table 3.03c: Monitoring-Triggered Contingencies 32

APPENDICES

APPENDIX 1 - INSPECTION FORMS

- Facility Inspection**
- Gas Monitoring Field Data**
- Groundwater Monitoring Field Data**

APPENDIX 2 – WELL DIAGRAMS



Operations and Maintenance Plan Old Minot Landfill Superfund Site

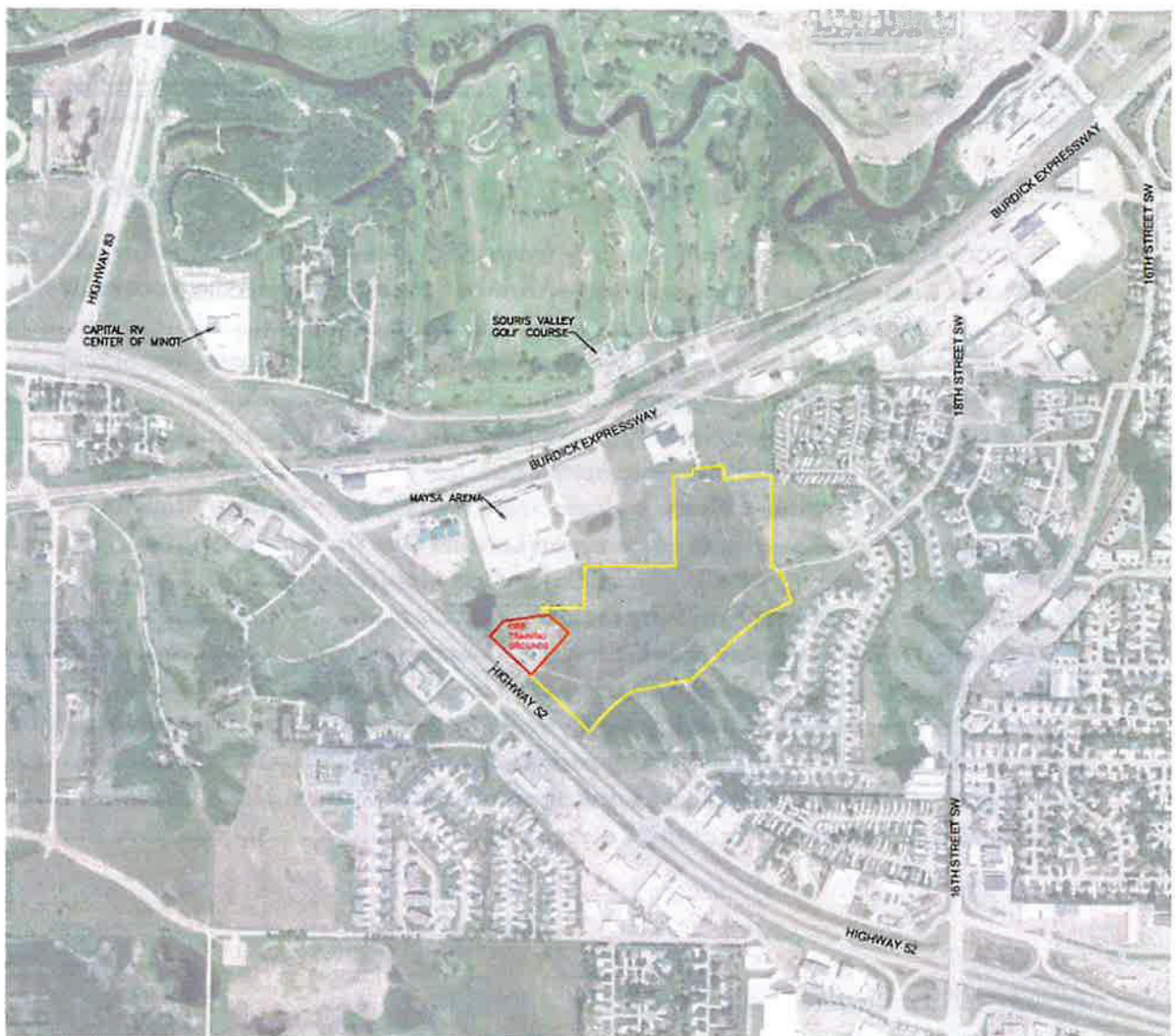
City of Minot, ND
CPS, Ltd.

1.00 BACKGROUND

1.01 SITE LOCATION

The Old Minot Landfill Superfund Site (Site) is a closed waste disposal facility that has previously been deleted from the Superfund National Priorities List (NPL). The Site is located in Section 27, Township 155 North, Range 83 West in Ward County, North Dakota, approximately one mile southwest of downtown Minot, ND. The Site is situated nearly 2,000 feet south of the Souris River, and east of the intersection of Burdick Expressway and the combined U.S. Highways 2 and 52 Bypass. The Site location is depicted in **Figure 1.01** below.

Figure 1.01 Site Location



Land use in the vicinity of the Site is general commercial district and residential; the area southwest of Highways 2 and 52 is general commercial district. The fill area that received municipal and industrial waste covers approximately 26.4 acres.



**Operations and Maintenance Plan
Old Minot Landfill Superfund Site**

City of Minot, ND
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1.02 POINT OF CONTACT

The contact for general correspondence regarding the Site is the City of Minot (City):

City of Minot
Public Works Department
1025 31st Street Southeast
Minot, ND 58701
(701) 857-4140
PublicWorks@minotnd.gov

1.03 HISTORICAL DEVELOPMENT OF SITE OPERATION & MAINTENANCE REQUIREMENTS

The operation and maintenance of the Site is subject to the terms of a Consent Decree between the United States of America, State of North Dakota, and City of Minot, Civil Action A4-95-141A, U.S. District Court, District of North Dakota. Several investigations were performed at the Site, which culminated in a Remedial Investigation (RI) performed by the City's consultant Donohue & Associates (Donohue). Contamination was identified and documented in a RI Report dated February 1992. An evaluation was conducted to determine which remedial measures could achieve specified cleanup goals. The evaluation and cleanup goals are described in a Site Feasibility Study (FS) completed in 1992 by Donohue.

On June 21, 1993, upon completion of the RI/FS for the Site, the U.S. Environmental Protection Agency (EPA) issued a Record of Decision (ROD) that selected a remedy for the Site. On January 23, 1996, a remedial design kickoff meeting was held between the City, EPA, North Dakota Department of Health (NDDH), and the City's consultant Wenck Associates, Inc. (Wenck). On April 10, 1996, an Explanation of Significant Differences (ESD) was prepared to address modifications to the remedy components. A subsequent ESD was signed on September 28, 2022 (2022 ESD), to modify the existing remedy to support recreational use on and adjacent to the landfill cap. The selected remedy for the Site, as specified in the ROD and modified in the ESDs, incorporates removal, treatment, and containment technologies to address the risks of treating leachate and managing the discharge of leachate and landfill gases at the Site. The selected remedy consisted of the elements listed in **Table 1.03** below:



**Operations and Maintenance Plan
Old Minot Landfill Superfund Site**

City of Minot, ND
CPS, Ltd.

Table 1.03: Elements of Selected Remedy from 1993 EPA Record of Decision (ROD)

Elements of Selected Remedy
(1) Institutional controls to prohibit construction on the landfill or the use of water beneath the landfill or in the immediate vicinity of the landfill for drinking water purposes; the 2022 ESD modified this element to allow recreational use on and adjacent to the landfill cap.
(2) Consolidation of waste and contaminated soil (both from the north end of the landfill and in the vicinity of leachate seeps) under the cap, and cap improvements to limit precipitation infiltration and control stormwater runoff.
(3) As modified by the 1996 ESD, leachate extraction from the landfill using a passive gravity drain system to manage leachate levels in the landfill, to prevent leachate seeps through the cap, and to reduce the potential for leachate migration from the landfill into the groundwater; and subsequent treatment of the leachate at the City's wastewater treatment plant (WWTP).
(4) As modified by the 1996 ESD, passive landfill gas venting to control landfill gas to reduce pressure in the landfill that could damage the landfill cap and increase the potential for leachate migration.
(5) Explosive level monitoring of passive vents to reduce human exposure to potentially explosive gases.
(6) Groundwater monitoring to detect any future release of contaminants into the groundwater.

In April 1996, a Remedial Design (RD) Report was approved by the EPA and NDDH. In June 1996, a contractor was selected to perform Remedial Action (RA) construction, including remedy elements 2, 3, and 4 listed in **Table 1.03**. The RA construction was completed in September 1996. Institutional controls were implemented by the City, and the Site was deleted from the NPL on April 1, 1997.

1.04 ENFORCEMENT

The North Dakota Department of Environmental Quality (NDDEQ) came into existence on April 29, 2019, and became the State agency responsible for administration and enforcement of environmental protection programs, laws, and rules previously administered and enforced by the NDDH's Environmental Health Section. Pursuant to 2017 N.D. Sess. Laws Ch. 199, § 1, the NDDH's interest in this matter has been assigned to the NDDEQ.

1.05 PROPOSED SITE REUSE AND DEVELOPMENT

In 2013, discussions began regarding reuse of the Site. The Minot Park District (Park District) developed preliminary plans for a frisbee golf course, non-motorized cross-country trails, and mountain biking trails. The 2022 ESD modified the previous remedy to support recreational use on and adjacent to the landfill cap. A workplan was prepared by the City's consultant Ackerman-Estvold in 2023 (2023 Workplan) that included conceptual layouts for these features, as excerpted below. These figures are available in their entirety in the 2023 Workplan.



**Operations and Maintenance Plan
Old Minot Landfill Superfund Site**

City of Minot, ND
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Figure 1.05a: 2023 Workplan Disc Golf Course Layout

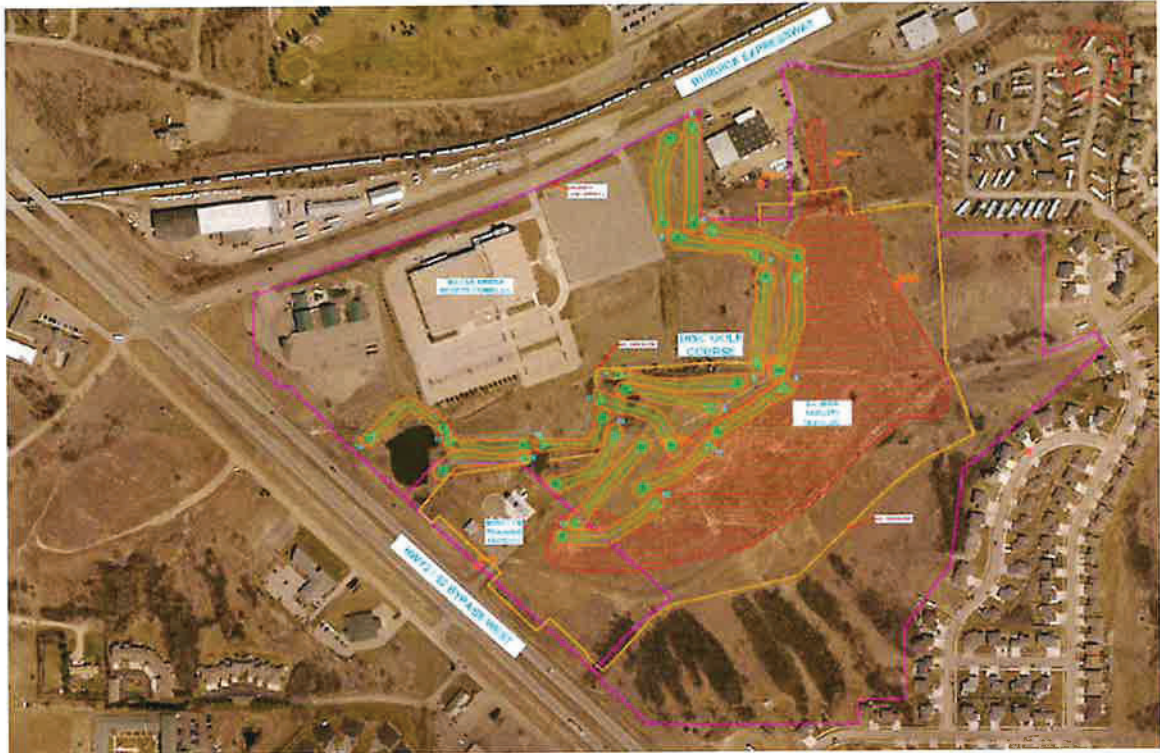
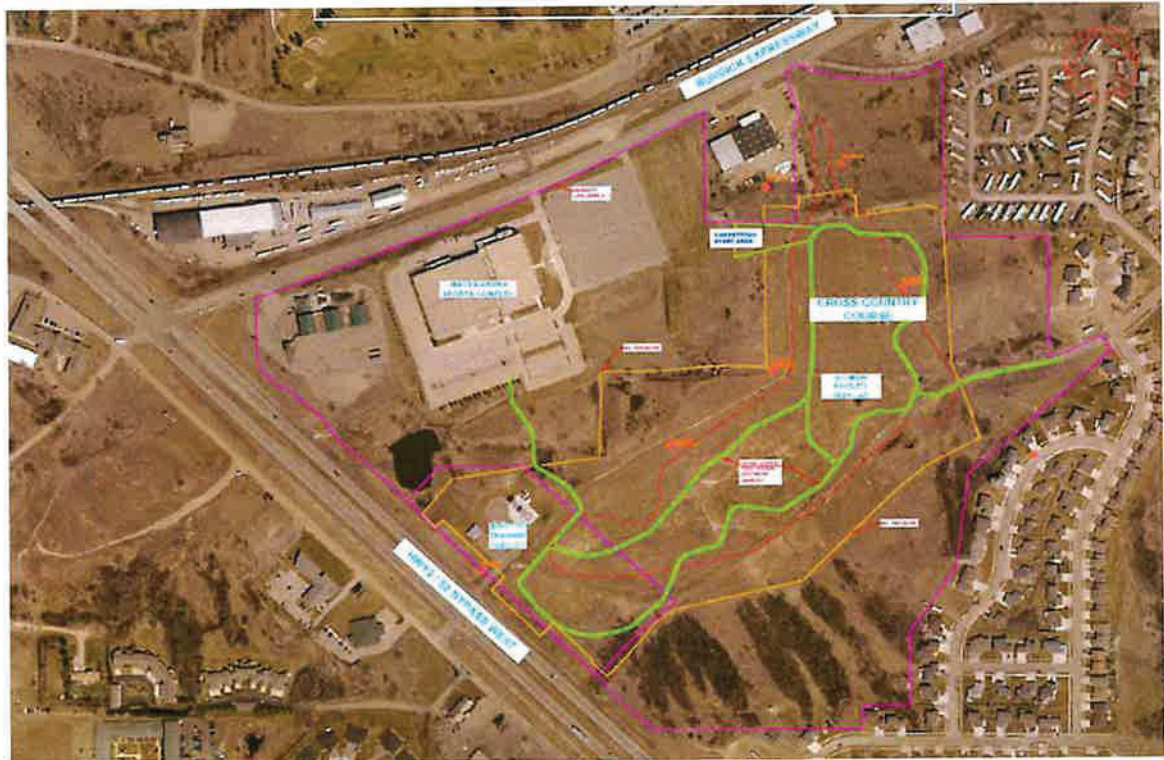


Figure 1.05b: 2023 Workplan Cross Country Course System Layout





**Operations and Maintenance Plan
Old Minot Landfill Superfund Site**

City of Minot, ND
CPS, Ltd.

Figure 1.05c: 2023 Workplan Mountain Biking Trail System Layout



1.06 OPERATION AND MAINTENANCE PLAN OBJECTIVES

This Operations and Maintenance Plan (O&M Plan) will accommodate reuse of the Site while continuing to protect the remedial actions established to protect human health and the environment.

The objectives of the O&M Plan are to:

- (1) assure that the prescribed remedy for the Site is performing as designed;
- (2) assure that the remedy complies with the performance standards specified in the ROD and ESDs, as summarized in **Table 1.06**; and
- (3) monitor the media, which include groundwater, landfill gas (LFG), and explosive levels.

Therefore, this O&M Plan is both a performance and compliance monitoring plan for the Site.

Although not specifically required by the Consent Decree for this Site, ND Admin. Code § 33.1-20-04.1-09(5) was also implemented as a guide to determine facility operations and maintenance requirements.



**Operations and Maintenance Plan
Old Minot Landfill Superfund Site**

City of Minot, ND
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**Table 1.06: Remediation Goals and Performance Standards
from the Record of Decision (ROD) signed June 21, 1993**

Remediation Goals	Performance Standards
(1) Prevent direct contact with landfill contents including the solid waste, leachate, and gas.	(1) Minimum three-foot cap over the landfill, consistent with substantive requirements of North Dakota Solid Waste Management Act and pertinent federal Solid Waste Land Disposal requirements [40 CFR Parts 241 and 257] and Surface Water Control requirements [40 CFR Part 264].
(2) Manage leachate: to limit future leachate migration out of the landfill to ensure a low risk to potential ground water receptors; and to maintain ground-water quality outside the landfill within drinking-water standards.	(2) Water quality standards in accordance with SDWA [40 CFR Parts 141 and 143] and NPDES [40 CFR Parts 125, 136, and 403] requirements. Ground water adjacent to the landfill shall not contain contaminants at levels that cause the ground water to exceed the 1.0E-04 to 1.0E-06 risk range for carcinogens, or the hazard index to exceed 1 for noncarcinogens for potential receptors located adjacent to the landfill.
(3) Treat or isolate soils in the immediate vicinity of leachate seeps to prevent contact or ingestion that would result in unacceptable carcinogenic or noncarcinogenic risks.	(3) Contaminated soils shall be removed to a depth of approximately three feet and consolidated under the landfill cap, consistent with substantive requirements of North Dakota Solid Waste Management Act and pertinent federal Solid Waste Land Disposal requirements [40 CFR Parts 241 and 257].
(4) Control leachate seeps to prevent the movement of contaminants by surface flow to off-site soil and surface water.	(4) Landfill cap shall be reconstructed in accordance with substantive requirements of North Dakota Solid Waste Management Act and pertinent federal Solid Waste Land Disposal requirements [40 CFR Parts 241 and 257] and Surface Water Control requirements [40 CFR Part 264].
(5) Manage landfill gas to ensure a low risk to air receptors.	(5) Air quality standards in accordance with pertinent requirements of 40 CFR Part 6, Subpart C, Parts 50, 52, 61, and 241, the North Dakota Solid Waste Management Act, and the North Dakota Air Pollution Control Regulations. Air, at or near the landfill surface, shall not contain contaminants at levels that cause the air to exceed the 1.0E-04 to 1.0E-06 risk range for carcinogens, or the hazard index to exceed 1 for noncarcinogens for potential receptors located adjacent to the landfill.
(6) Manage landfill gas to reduce gas pressure within the landfill in order to protect the cap.	(6) Pertinent requirements of the North Dakota Solid Waste Management Act and federal Solid Waste Land Disposal requirements [40 CFR Parts 241 and 257].
(7) Manage landfill gas to reduce pressure head buildup of leachate on the landfill base to minimize leachate migration to ground water.	(7) Pertinent requirements of the North Dakota Solid Waste Management Act and federal Solid Waste Landfill Disposal requirements [40 CFR Parts 241 and 257].
(8) Manage leachate to prevent exceedances of water quality standards in natural surface waters due to stormwater runoff from the site or discharge from a treatment facility.	(8) Water quality standards in accordance with SDWA [40 CFR Parts 141 and 143] and NPDES [40 CFR Parts 125, 136, and 403] requirements, Standards of Water Quality for the State of North Dakota, and North Dakota Pollutant Discharge Elimination System regulations.

Note: Performance Standards and citations reflect current references as of the issuance of the ROD.



**Operations and Maintenance Plan
Old Minot Landfill Superfund Site**

City of Minot, ND
CPS, Ltd.

1.07 RECORDKEEPING AND REPORTING

1.07a Records

Site Operations, Maintenance and Monitoring records will be retained in a digital format on file at the City's Public Works office for a minimum of ten years after the last action. Following the expiration of this time period, previously-submitted records may be available from NDDEQ or EPA.

1.07b Schedule Summary of Site Inspections, Monitoring, and Reporting

Each year, the following table shall be produced for the Site, and kept up to date in the Site records as required inspections, monitoring, and reporting are completed:

Table 1.07b: Schedule Summary of Site Monitoring, Inspections, and Reporting

Month	Site Inspections	Groundwater Monitoring	Gas Monitoring	NMOC Tier 1 Calculations	Annual Report
January			✓*		
February					
March	✓				✓
April	✓		✓		
May	✓	✓			
June	✓				
July	✓		✓		
August	✓				
September	✓				
October	✓		✓		
November				✓	
December					

*Year 1 only for baseline data collection.

1.07c Site Annual Report

A Site Annual Report will be submitted annually in electronic format to the EPA and NDDEQ by March 1 of each year. The report shall include the following sections, for which more specific requirements are set forth in the applicable sections of this document, noted in parentheses below.

- (1) Schedule Summary of Site Monitoring, Inspections and Reporting (see **Section 1.07b**)
- (2) General Facility Inspection, Maintenance and Reporting (see **Section 2.04**)
- (3) Landfill Cap Management (see **Section 2.05**)
- (4) Leachate Management (see **Section 2.06**)
- (5) Landfill Gas Management (see **Section 2.07**)
- (6) Groundwater Quality (see **Section 2.08**)
- (7) Contingency Plan (see **Section 3.00**)

The City shall also provide written responses to applicable inquiries from EPA and NDDEQ within 30 days of their written request to the City.



2.00 FACILITY OPERATION, MAINTENANCE, MONITORING AND REPORTING

2.01 RESPONSIBILITY FOR COMPLIANCE

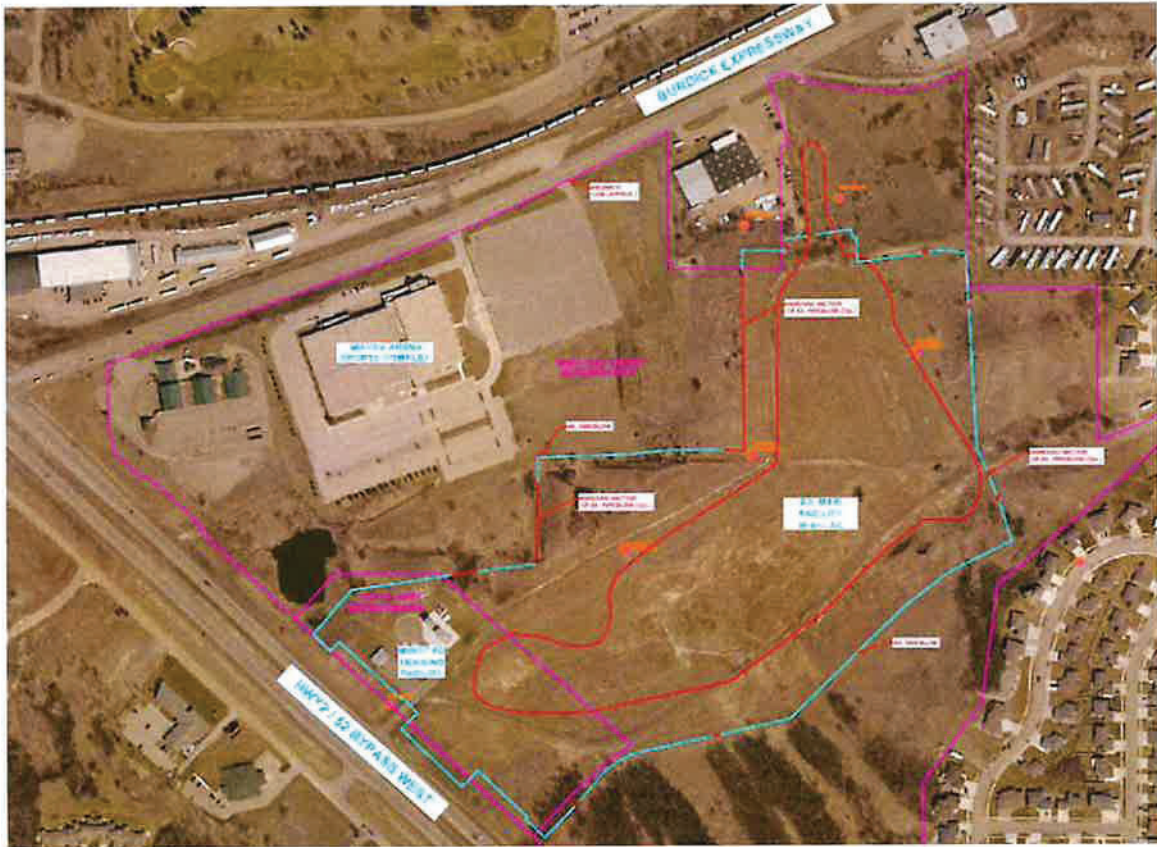
The City is responsible for the operation and maintenance of the Site under the terms of a Consent Decree between the United States of America, State of North Dakota and City of Minot, Civil Action A4-95-141A, U.S. District Court, District of North Dakota.

2.02 SITE ACCESS AND SECURITY

There is an existing six-foot-high security fence around the perimeter of the landfill. Monitoring wells, piezometers, and vehicular entrances into the landfill via the security fence gates will be kept locked when maintenance personnel are not present on the Site. Only City workers and others responsible for monitoring, maintenance, and inspections will be given keys to the locks.

Access for the reuse activities will be limited to pedestrian or bicycle access via openings approved by the City, EPA, and NDDEQ. To ensure the RA is kept intact, openings will be allowed in the fence at multiple key locations to allow access to the frisbee golf course as well as the cross country and mountain biking trails. Openings will be constructed such that foot or bicycle traffic can readily access the Site, and the entrance of motor vehicles and ATVs will be prevented. This will be accomplished by using bollards or other immovable objects placed in front of fence openings. To accommodate frisbee golf, several hundred feet of security fence will be removed along the north side of the Site. The Site will be monitored to ensure vehicular traffic remains off the cap. The 2023 Workplan included proposed locations for these fence openings:

Figure 2.02: 2023 Workplan Proposed Fence Openings





**Operations and Maintenance Plan
Old Minot Landfill Superfund Site**

City of Minot, ND
CPS, Ltd.

2.03 HEALTH AND SAFETY

Site health and safety requirements are addressed in the Health and Safety Plan (HASP).

2.04 GENERAL FACILITY INSPECTION, MAINTENANCE AND REPORTING

2.04a Regular Site Maintenance Activities

The City and the Park District will maintain the Site as follows, pursuant to a Memorandum of Understanding between the City and the Park District.

Table 2.04.a: Maintenance Schedule

Item	Schedule	Responsibility
(1) Mowing	As Needed	Park District
(2) Ditch / Stormwater Feature Cleaning	As Needed	Park District
(3) Leachate Drainpipe Cleaning	Monthly, March-October	City of Minot

The main purpose for regular mowing is to ensure deep rooting plants or trees are not growing into the clay cap. The Park District will allow native grasses to grow with cross country or mountain biking trails being mowed paths. Paths across the landfill cap will be monitored for rutting or vegetative cover damage and will be relocated or repaired as necessary.

Any proposal to discontinue maintenance items, in whole or in part, will be submitted to the EPA and NDDEQ for approval prior to implementation. No discontinuation is permissible until and unless EPA and NDDEQ have provided their written approval.

2.04b Site Inspection Frequency

At a minimum, the Site will be inspected as indicated in **Tables 2.04b.1 and 2.04b.2**. Duties of the Park District, notwithstanding the City's obligations mentioned in **Section 2.01**, are pursuant to a Memorandum of Understanding between the City and the Park District.

Any proposal to discontinue inspections, in whole or in part, will be submitted to the EPA and NDDEQ to obtain approval prior to implementation. No discontinuation is permissible until and unless EPA and NDDEQ have provided their written approval.



**Operations and Maintenance Plan
Old Minot Landfill Superfund Site**

City of Minot, ND
CPS, Ltd.

Table 2.04b.1: Park District Monthly Site Inspection Category List

Item	System(s)
(1) Vandalism	All
(2) Uncontrolled vegetative growth	Cap
(3) Erosion on landfill surface	Cap
(4) Excessive rutting or lack of vegetation from trail activities	Cap
(5) Damage by or indication of presence of rodents or burrowing animals	Cap
(6) Stressed vegetation	Cap
(7) Excessive settlement of landfill cap	Cap
(8) Leachate seepage on or around the landfill cap, including well abandonment locations within the landfill waste boundaries	Cap. Leachate Drain
(9) Groundwater monitoring wells – well should be intact with lock in place	Groundwater
(10) Blocking or improper functioning of stormwater drainage structures, especially catch basins, culverts, and ditches	Surface Water
(11) Blocking or improper functioning of gas vents	Gas
(12) Integrity of fence and locking gates, especially on steep banks where erosion may displace fence posts.	Fence

The items in this table will be inspected monthly from March through October of each year.

Table 2.04b.2: City of Minot Site Inspection Category List and Schedule

Item	System(s)	Schedule
(1) Stressed vegetation	Cap	Semiannually in March and October
(2) Excessive settlement of landfill cap	Cap	Semiannually in March and October
(3) Leachate seepage on or around the landfill cap, including well abandonment locations within the landfill waste boundaries	Cap, Leachate Drain	Semiannually in March and October
(4) Blocking or improper functioning of leachate drain	Leachate Drain	At time of groundwater sampling
(5) Groundwater well damage or improper functioning	Groundwater	At time of groundwater sampling
(6) Blocking or improper functioning of gas vents	Gas	Annually



**Operations and Maintenance Plan
Old Minot Landfill Superfund Site**

City of Minot, ND
CPS, Ltd.

2.04c Operations and Maintenance Reporting

Operations and Maintenance records will be retained in a digital format on file at the City's Public Works office for a minimum of ten years from the date of the record.

Operations and Maintenance reporting shall be submitted annually in electronic format to the EPA and NDDEQ as part of the Site Annual Report, and shall include the following:

- (1) Summary of inspections throughout the year, issues encountered, and any mitigative or remedial actions necessary.
 - a. Completed Site inspection checklists.
 - b. Photographs taken during Site inspections.
 - c. Documentation of required notifications and performance thereof as applicable, or an indication that no notifications were required during the reporting period, and
- (2) Proposed activities for subsequent reporting submittal (if at all different from those specified herein).
- (3) Anticipated date of subsequent reporting submittal.

2.05 LANDFILL CAP MANAGEMENT

2.05a Landfill Cap Function and Configuration

The landfill cap is intended to limit precipitation infiltration and prevent direct contact with landfill contents including solid waste, leachate, and gas.

In accordance with Performance Standard number 1 in **Table 1.06**, the landfill cap was designed to be a minimum of three feet thick, consisting of (from top to bottom) a minimum six-inch-thick layer of topsoil, a minimum twelve-inch-thick layer of clay-rich rooting soil material, and a minimum eighteen-inch-thick layer of clay. The surface of the cap is vegetated with native grasses.

2.05b Surface Water Controls

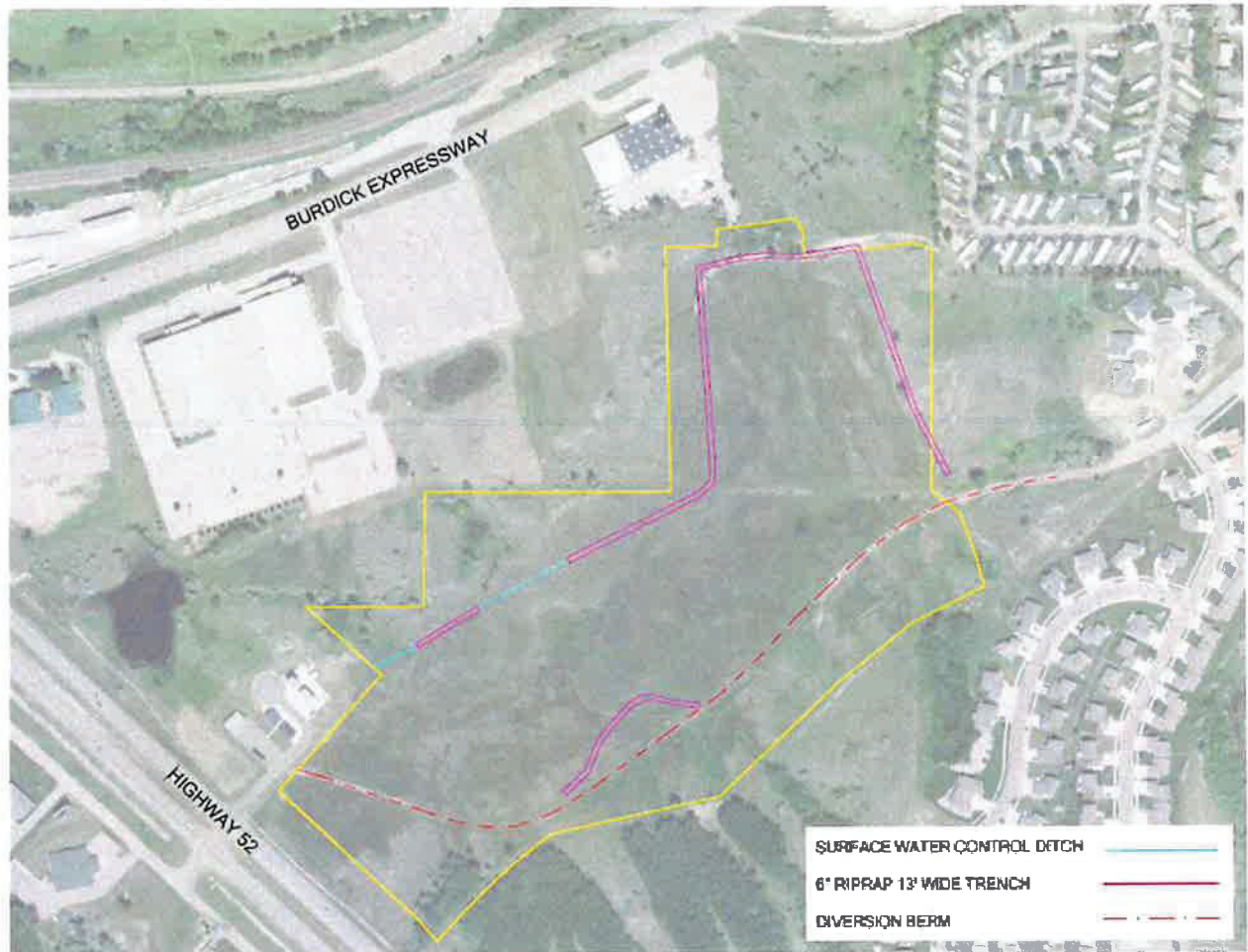
All stormwater controls must be compliant with North Dakota's laws and regulations and the City's ordinances and regulations, and shall not interfere with selected remedy in the ROD.

Surface water controls include ditches and berms along the edges of the landfill to control stormwater run-on and runoff. Diversion berms constructed within the landfill reduce the potential for stormwater to erode the cap. All stormwater controls and drainage culverts will be maintained clear of debris to ensure successful operation.

The majority of stormwater from the landfill drainage area, including several off-site areas, is routed to catch basins within the landfill, which allow surface water to flow off-site to the north via storm sewers. Pertinent locations are riprapped to reduce the potential for erosion.



Figure 2.05b: Surface Water Controls

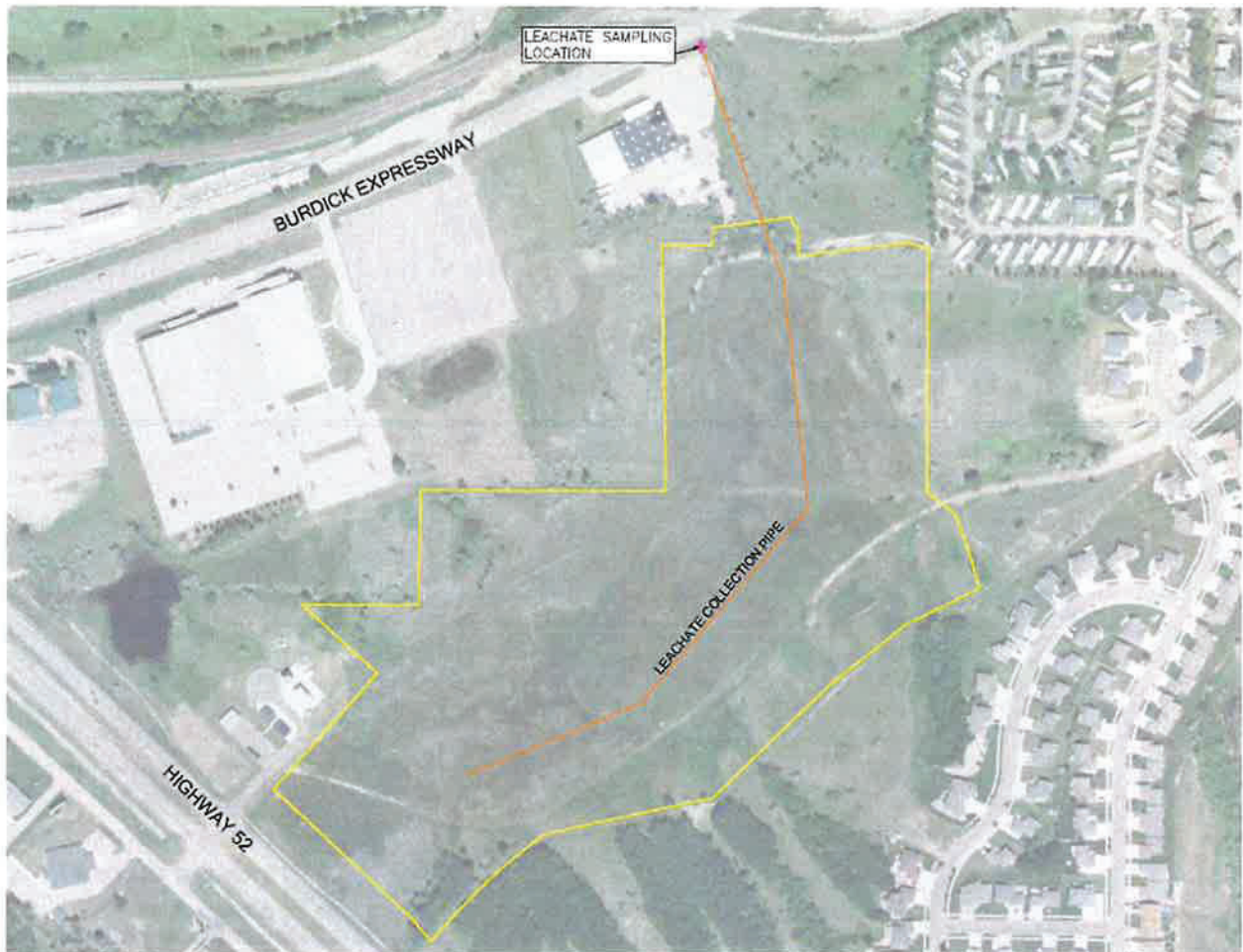


2.06 LEACHATE MANAGEMENT

Leachate within the landfill is extracted by a perforated high-density polyethylene (HDPE) drainpipe installed approximately eight feet below the surface of the landfill and extending from the south to the north through approximately the center of the landfill. The leachate drain is intended to lower the leachate level in the landfill to help prevent leachate seeps through the cap and to reduce the potential for leachate migration from the landfill into the groundwater. The drainpipe discharges leachate to the sanitary sewer adjacent to the Site, from which it flows to the City's WWTP. The approximate location of the leachate drain is shown in **Figure 2.06**.



Figure 2.06: Leachate Drain



2.07 LANDFILL GAS MANAGEMENT

2.07a Passive Gas Venting System

Vertical PVC riser pipes extending from the leachate drain allow passive gas venting from the landfill. Eight passive gas vents are located throughout the Site, the approximate locations of which are depicted in **Figure 2.07a**. The passive vents are intended to control LFG to reduce pressures in the landfill that can damage the landfill cap and can increase the potential for leachate migration. Removable wind turbines installed at the top of each riser pipe help to draw gas from the landfill by creating small negative pressures.



Figure 2.07a: Passive Gas Vent Locations



Prior to the Park District promoting public access to the Site, gas vents will be extended to a minimum height of ten feet above the finished cap to deter tampering.

2.07b Gas Quality Monitoring

1. Objectives

Gas quality monitoring will be performed on the Site to help ensure that the public is not exposed to harmful levels of gases typically generated by landfills. Compliance goals are based in part on the EPA's criteria pollutants for ambient air, New Source Performance Standards (NSPS) and Emission Guidelines (EG) for air emissions from new and existing municipal solid waste landfills published in the Code of Federal Regulations, and North Dakota Administrative Code performance criteria for municipal solid waste landfills included in ND Admin. Code § 33.1-20-06.1-02(4).

2. Ambient Air Standards

The EPA's criteria air pollutants include carbon monoxide (CO), lead (Pb), ground-level ozone (O₃), particulate matter (PM), nitrogen dioxide (NO₂), and sulfur dioxide (SO₂). Ambient Air Quality Standards based on State of North Dakota and Federal guidelines include these items, as well as Hydrogen Sulfide (H₂S). These ambient air quality standards are summarized in **Table 2.07b.1**.



**Operations and Maintenance Plan
Old Minot Landfill Superfund Site**

City of Minot, ND
CPS, Ltd.

Table 2.07b.1: Federal and North Dakota State Ambient Air Quality Standards

Pollutant	Averaging Period	North Dakota		Federal	
		ug/m ³	ppb	ug/m ³	ppb
Carbon Monoxide (CO)	1-hour ^a	40,000	35,000	40,000	35,000
	8-hour ^a	10,000	9,000	10,000	9,000
Lead	3-month ^b	0.15	--	0.15	--
Nitrogen Dioxide (NO ₂)	Annual ^c	100	53	100	53
	1-hour ^d	188	100	188	100
Ozone (O ₃)	8-hour ^e	137	70	137	70
	24-hour ^f	150	--	150	--
Particulate Matter	24-hour ^g	35	--	35	--
	Annual ^h	12	--	9	--
	1-hour ⁱ	196	75	196	75
Sulfur Dioxide (SO ₂)	3-hour ^a	1,309	500	1,309	500
	24-hour ^{a*}	--	--	365	140
	Annual ^{c*}	--	--	80	30
	Instantaneous	14,000	10,000	--	--
Hydrogen Sulfide (H ₂ S)	1-hour ^j	280	200	--	--
	24-hour ^a	140	100	--	--
	Quarter	28	20	--	--

Notes:

- a. Not to be exceeded more than once per calendar year.
- b. Not to be exceeded by a rolling three-month arithmetic mean.
- c. Annual arithmetic mean.
- d. Three-year average of 98th percentile of 1-hour daily maximum concentrations.
- e. Three-year average of the annual fourth-highest daily maximum 8-hour concentrations.
- f. Not to be exceeded more than once per year on average over a three-year period.
- g. Three-year average of the 98th percentile values.
- h. Three-year average of annual concentrations.
- i. Three-year average of 99th percentile of 1-hour daily maximum concentrations.
- j. Not to be exceeded more than once per month.
- * The 24-hour and Annual SO₂ standards were revoked per the 2010 rulemaking. However, these standards will remain in effect until one year after attainment status designations for the 2010 1-hour SO₂ standard are complete for a given area.



**Operations and Maintenance Plan
Old Minot Landfill Superfund Site**

City of Minot, ND
CPS, Ltd.

3. Landfill Emissions Standards

LFG is generated via microbial decomposition of municipal solid waste (MSW) in a landfill under aerobic or anaerobic conditions. MSW initially undergoes aerobic microbial activity that produces predominately nitrogen gas and carbon dioxide. As oxygen levels decline, gas composition changes to a mixture of methane and carbon dioxide. LFG typically contains a small percentage of non-methane organic compounds (NMOC). The NMOC fraction consists of various organic hazardous air pollutants (HAPs), greenhouse gases, and volatile organic compounds (VOCs).

NSPS and EG for air emissions from new and existing municipal solid waste (MSW) landfills were promulgated on March 12, 1996. The NSPS, 40 CFR Part 60, Subpart WWW, are federal regulations affecting air emissions for MSW landfills that began construction, modification, or reconstruction on or after May 30, 1991. The EG, 40 CFR, part 60, subpart Cf, regulates existing landfills that accepted waste after November 8, 1987, and that commenced construction, reconstruction or modification on or before July 17, 2014. NSPS and EG require owners of new and existing MSW landfills to submit a design capacity report to the NDDEQ to determine ultimate facility capacity. Landfills equal to or larger than 2.5 million megagrams (Mg) or 2.5 million cubic meters (m³) must provide periodic estimates of annual NMOC, either through calculation using standard assumed values or based on site-specific measurements.

It is notable that, based on age and capacity, this Site is not subject to these requirements; however, these standards provide an established benchmark for quantification and evaluation of estimated LFG emissions.

EPA's final rule provides a tiered system under which the landfill owner or operator can determine whether specified thresholds are exceeded. The first tier (Tier 1) of this system requires comparison of the calculated NMOC mass emission rate using a specified concentration of NMOC to the standard of 34 Mg per year.

From 40 CFR § 62.16718(a)(1)(ii):

$$M^{NMOC} = \text{Mass Emission Rate of NMOC (Mg/year)} = 2 L_0 R (e^{-kc} - e^{-kt}) (C_{NMOC}) (3.6 \times 10^{-9})$$

where

L_0 = Methane Generation Potential (m³/Mg) = 170 m³/Mg

R = Average Annual Acceptance Rate (Mg/yr); Based on historical records, R = 176,865 Mg/yr

k = Methane Generation Rate Constant (yr⁻¹) = 0.02/yr

c = Time Since Closure (yr); This landfill closed in 1971.

t = Age of Landfill (yr); This landfill opened in 1961.

C_{NMOC} = Concentration of NMOC as specified in 40 CFR § 62.16718(a)(1) =
4000 ppmv as hexane

If the resulting emission rate is less than 34 Mg per year, then the owner or operator must submit an NMOC emission rate report and must recalculate the NMOC mass emission rate annually.



**Operations and Maintenance Plan
Old Minot Landfill Superfund Site**

City of Minot, ND
CPS, Ltd.

4. Explosive Limit Standards

Methane is the most likely LFG constituent to pose an explosion hazard. Other flammable LFG constituents such as Ammonia and NMOCs are unlikely to be present at concentrations high enough to pose an explosion hazard. However, the flammable NMOCs do contribute to total explosive hazard when combined with methane in a confined space.

Table 2.07b.2: Explosive Limits of Common Landfill Gas Components

Landfill Gas Component	Lower Explosive Limit (%)	Upper Explosive Limit (%)
Methane	5	15
Carbon Dioxide (CO ₂)	Not flammable or explosive.	
Nitrogen Dioxide (NO ₂)	Not flammable or explosive.	
Oxygen (O ₂)	Not flammable, but necessary to support explosions.	
Ammonia (NH ₃)	15	28
NMOCs		
Acrylonitrile	3	17
Benzene	1.2	7.8
1,1-dichloroethane	5.4	11.4
cis-1,2-dichloroethylene	5.6	12.8
Dichloromethane	13	23
Carbonyl Sulfide	12	29
Ethyl Benzene	0.8	6.7
Hexane	1.1	7.5
Methyl Ethyl Ketone	1.4 @ 200°F	11.4 @ 200°F
Tetrachloroethylene	Not combustible	Not combustible
Toluene	1.1	7.1
Trichloroethylene	8	10.5
Vinyl Chloride	3.6	33
Xylenes	0.9-1.1	6.7-7.0
Hydrogen Sulfide (H ₂ S)	4	44

As a precaution, due to public access to the Site, gas monitoring will follow ND Admin. Code § 33.1-20-06.1-02(4). According to ND Admin. Code § 33.1-20-06.1-02(4), methane and other gases from waste decomposition may not be allowed to migrate laterally from the landfill so as to endanger structures, environmental resources, or adjacent properties. The concentration of methane gas generated by landfills on the facility must not exceed twenty-five percent of the lower explosive limit for methane in structures or appurtenances on the facility and must not exceed the lower explosive limit for methane at the facility boundary. Monitoring of methane gas must be conducted at least quarterly as indicated in **Table 1.07b**, with



**Operations and Maintenance Plan
Old Minot Landfill Superfund Site**

City of Minot, ND
CPS, Ltd.

actual frequency of monitoring taking into consideration such factors as the facility site conditions, hydrogeologic conditions surrounding the site, or climate of the area.

5. Gas Monitoring Procedures

Calculated estimates of NMOC emissions from the landfill will be generated annually based on Tier 1 calculations as described in **Section 2.07.b.3**.

Gas quality monitoring on Site will be performed quarterly for the first year for baseline data collection, and thereafter will be performed three times per year, with no monitoring in winter due to typically higher atmospheric pressures. Gas monitoring will be primarily performed using a portable gas meter. Upon arrival to the site, monitoring personnel will verify the following information using the National Weather Service website, and shall record the information on the applicable field data form:

Table 2.07b.3: Weather Data Verification for Gas Monitoring

Condition	Unit
Temperature	°F
Cloud Cover	Estimated %
Humidity	%
Wind Direction	Cardinal Direction Degrees (N = 0°, E = 90°, S = 180°, W = 270°)
Wind Speed	mph
Barometric Pressure	In Hg
Dewpoint	°F
Visibility	mi
Wind Chill	°F

In order to proceed with gas quality monitoring, no precipitation can be in progress, wind speed must be 15 mph or less, and barometric pressure must be between 29 and 31 in Hg (mercury). If weather conditions are not suitable for gas monitoring, monitoring personnel will reschedule the monitoring for the next business day that forecast weather conditions are suitable.

If weather conditions are suitable for gas monitoring, monitoring personnel will proceed to the farthest upwind gas vent. Monitoring personnel will take position on the ground at the gas vent directly downwind of the vent and shall procure ambient air readings for the parameters indicated in **Table 2.07b.4** with the meter located as close to the vent as possible, and at a height of approximately five feet above the ground. Particulate matter will not be measured using a meter; however, any visually apparent particulate matter in the air shall be noted.

Measured concentrations will be recorded on the Gas Quality Monitoring Form, available in **Appendix 1**.



**Operations and Maintenance Plan
Old Minot Landfill Superfund Site**

City of Minot, ND
CPS, Ltd.

Gas monitoring will be performed likewise at each of the eight gas vents, proceeding in order from upwind to downwind. Suitable atmospheric conditions will be verified and recorded prior to monitoring at each vent, and the Gas Quality Monitoring Form completed for each vent.

Following completion of gas monitoring at the vents, similar gas monitoring will be performed on the interior of the leachate manhole, followed by the interior of each gas vent. The vents may be monitored in any order, but shall be monitored after the vent perimeters and leachate manhole interior. The points of measurement for gas quality readings in structures and vents shall be a minimum of three feet from the top of the structure.

Table 2.07b.4: Gas Monitoring Parameters

Parameter	Actionable Range in Ambient Air (%)	Actionable Range in Gas Vent (%)	Actionable Range in Manhole (%)
Methane	>1.25 ¹	1.25-15	>1.25 ¹
Carbon Dioxide (CO ₂)	>3 ²	N/A	N/A
Carbon Monoxide (CO)	>0.02 ²	N/A	N/A
Hydrogen Sulfide (H ₂ S)	Detectable by Meter	1-44	>1 ¹
Oxygen (O ₂)	N/A	N/A	N/A

Notes: 1. 25% of Lower Explosive Limit (Methane standard set forth in ND Admin. Code § 33.1-20-06.1-02.4)

2. National Institute for Occupational Safety and Health (NIOSH) Recommended Exposure Limit
(for shortest time limit published in NIOSH Pocket Guide to Chemical Hazards)

6. Gas Quality Reporting

Gas quality reporting shall be submitted annually in electronic format to the EPA and NDDEQ as part of the Site Annual Report, and shall include the following:

- (1) Summary of gas quality monitoring and results; and
- (2) NMOC emissions calculation.

In addition, accordance with ND Admin. Code § 33.1-20-06.1-02(4), if methane gas levels exceed twenty-five percent of the lower explosive limit for methane in structures or appurtenances on the facility or if methane gas levels exceed the lower explosive limit for methane during ambient air testing, the City will provide written notification the EPA and NDDEQ within seven days of discovery of the exceedance.



2.08 GROUNDWATER QUALITY

2.08a Objectives

2.08b Groundwater Monitoring Wells

1. Monitoring Well Network

Seven groundwater monitoring wells are located throughout the Site to monitor for the potential future releases of contamination above performance standards to the surficial aquifer. Locations of the groundwater monitoring wells are depicted in **Figure 2.08b.1** and tabulated in **Table 2.08b.1**. Numbered piezometers are nested respectively with monitoring wells of like numbers.

Figure 2.08b.1: Groundwater Monitoring Wells





**Operations and Maintenance Plan
Old Minot Landfill Superfund Site**

City of Minot, ND
CPS, Ltd.

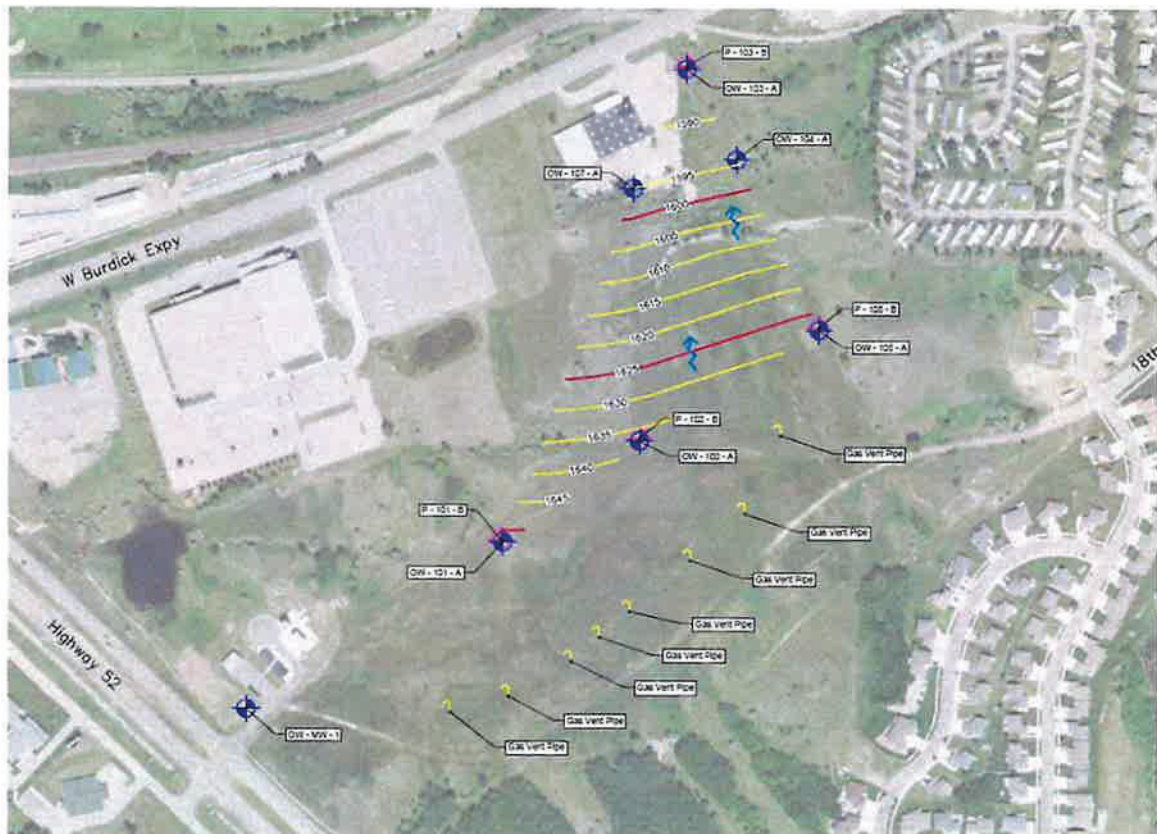
Table 2.08b.1: Groundwater Monitoring Well Locations

Well ID	Northing	Easting	Ground Elevation (ft MSL)
OM-MW-1	444750.038	1766084.835	1698.761
OW-101-A	445223.923	1766814.111	1677.837
OW-102-A	445510.674	1767202.71	1652.600
OW-103-A	446565.224	1767335.797	1595.898
OW-104-A	446308.923	1767478.01	1601.857
OW-105-A	445825.264	1767713.052	1634.923
OW-107-A	446226.059	1767184.661	1600.829
P-101-B	445231.646	1766808.38	1677.924
P-102-B	445518.367	1767203.065	1652.004
P-103-B	446574.385	1767335.602	1595.861
P-105-B	445831.837	1767711.253	1634.940

*Data furnished by the City of Minot.
Horizontal Datum: North Dakota State Plane NAD83, North Zone, Distance Unit: US Survey Foot
Vertical Datum: NAVD88*

Piezometric contours were developed based on groundwater monitoring well static water level data collected during a recent groundwater sampling event. These contours are depicted in **Figure 2.08b.2**.

Figure 2.08b.2: Groundwater Well Static Water Level Piezometric Contours





**Operations and Maintenance Plan
Old Minot Landfill Superfund Site**

City of Minot, ND
CPS, Ltd.

Monitoring Well OW-MW-1 is upgradient of the landfill. Monitoring Wells OW-101-A, OW-102-A, and OW-105-A are located within the facility property boundary. Monitoring Wells OW-103-A, OW-104-A, and OW-107-A are downgradient of the landfill property.

Table 2.08b.2: Groundwater Monitoring Well and Piezometer Functions

Well ID	Purpose
OM-MW-1	Background Groundwater Quality and Water Level
OW-101-A	Downgradient Groundwater Quality and Water Level
OW-102-A	Downgradient Groundwater Quality and Water Level
OW-103-A	Downgradient Groundwater Quality and Water Level
OW-104-A	Downgradient Groundwater Quality and Water Level
OW-105-A	Downgradient Groundwater Quality and Water Level
OW-107-A	Downgradient Groundwater Quality and Water Level
P-101-B	Water Level
P-102-B	Water Level
P-103-B	Water Level
P-105-B	Water Level

2. Well Abandonment or Removal

Should well abandonment or removal be proposed in the future, all applicable North Dakota Well Abandonment Rules [ND Admin. Code § 33.1-18-02-10] must be followed. Well abandonment or removal must be approved in writing by the EPA and NDDEQ prior to such abandonment or removal.

2.08c Groundwater Monitoring Procedures

1. Groundwater Quality Sampling

As specified in the ROD, groundwater sampling will be performed at the existing monitoring wells outside the waste limits as shown on **Figure 2.08b**. The purpose for monitoring each well is described in **Table 2.08b**. All the wells are screened in the surficial aquifer. Detailed well diagrams showing the depth, casing, screen interval, and backfill material are included in **Appendix 2**.

The wells were sampled quarterly for the first year after RA construction and have since been sampled annually, in accordance with the ROD.

For each monitoring event, the wells should be sampled in order of potentially increasing contamination. The sampling order is typically determined by the results of the previous monitoring event. This procedure will help limit the possibility for cross-contamination of the wells during sampling. Unless sampling results dictate a change based on groundwater quality results, the sampling order will be: OW-MW-1, OW-101-A, OW-102-A, OW-107-A, OW-105-A, OW-103-A, and OW-104-A.

Groundwater quality analytical parameters, methods, proposed detection limits, and standards are shown in **Table 2.08c**.



**Operations and Maintenance Plan
Old Minot Landfill Superfund Site**

City of Minot, ND
CPS, Ltd.

Table 2.08c: Groundwater Quality Analytical Parameters, Methods, and Standards

Grouping	Analyte	Analytical Method	Proposed Minimum Detection Limits (ug/L)	Performance Standards (ug/L)		
				MCL ⁽¹⁾	MCLG ⁽²⁾	SMC ⁽³⁾
Benzene & Compounds	Benzene	EPA 8260	0.3	5	0	--
	Toluene	EPA 8260	0.8	1,000	1,000	--
Halogenated Aliphatics	t-1,2-Dichloroethene	EPA 8260	1.0	100	100	--
	Tetrachloroethene	EPA 8260	0.5	5	0	--
	Vinyl Chloride	EPA 8260	0.5	2	0	--
Inorganics	Barium	EPA 200.7	10	2,000	2,000	--
	Chromium	EPA 200.7	50	100	100	--
	Copper	EPA 200.7	50	--	1,300	1,000
	Zinc	EPA 200.7	50	--	--	5,000

Notes: The performance standards are the maximum contaminant levels (MCLs), maximum contaminant level goals (MCLGs), or secondary maximum contaminant levels (SMCLs) cited in 40 CFR 141 and 40 CFR 143, as required by the ROD.

(1) Maximum contaminant levels (MCLs) according to 40 CFR 141.11, 141.61 and 141.62.

(2) Maximum contaminant level goals (MCLGs) according to 40 CFR 141.50 and 141.51.

(3) Secondary maximum contaminant levels (SMCLs) according to 40 CFR 143.3.

The parameters were selected by:

1. Starting with the list of Chemicals of Concern (COCs) presented in Table 1 on page 13 of the ROD for all media (soil, air, etc.);
2. Eliminating COCs which were not detected in either groundwater or leachate during the RI;
3. Eliminating COCs which do not have either a maximum contaminant level (MCL), a maximum contaminant level goal (MCLG), or secondary maximum contaminant level (SMCL); and
4. Eliminating the polychlorinated biphenyl Aroclor 1254 which was detected in a leachate sample but was not detected in any of the monitoring wells surrounding the landfill. Aroclor 1254 is relatively insoluble in water and would not be expected to migrate away from the landfill.

Samples will be grab samples. Methods for well stabilization, purging, sample collection, decontamination, and Quality Assurance and Quality Control (QA/QC) procedures are specified in the QAPP.



Operations and Maintenance Plan Old Minot Landfill Superfund Site

City of Minot, ND
CPS, Ltd.

2. Groundwater Level Monitoring

An electronic water level measuring device will be used to measure water levels at the piezometers and monitoring wells described in **Table 2.08b.2** annually. Water level measurements for each event should occur in order of potentially increasing contamination. The monitoring order is typically determined by the water quality results of the previous monitoring event. This procedure will help limit the possibility for cross-contamination of the wells during monitoring. Unless sampling results dictate a change based on groundwater quality results, the sampling order will be: OM-MW-1, P-101-B, OW-101-A, P-102-B, OW-102-A, OW-107-A, P-105-B, OW-105-A, P-103-B, OW-103-A, and OW-104-A.

Additionally, the probe and several feet of measuring tape from the probe will be decontaminated prior to measuring the water level at each well. Decontamination will consist of cleaning with a solution of phosphate-free detergent followed by a distilled water rinse.

Water level measurements will be taken prior to sampling so that water levels will be representative of static aquifer conditions which may be altered by well sampling stabilization procedures. Water levels will be measured to 0.01 foot.

All groundwater level readings for the system will be performed on the same day and within as short a time span as practical to limit possible interferences caused by fluctuations in the water table.

Time, well identification, and depth to groundwater will be recorded in a fillable pdf form during sampling; the completed form will be stored in pdf format. The field logbooks will be reviewable in pdf or compatible format.

3. Leachate Monitoring

The City's WWTP has indicated that no leachate quality or flow monitoring is required for treatment purposes. This was confirmed by the City Utilities Director. However, since the leachate collection line collects groundwater/leachate from a large area beneath the landfill, the effluent will be sampled and analyzed to provide a general indicator of water quality within the landfill. The leachate samples will be collected on the same schedule as groundwater samples from the monitoring wells.

The leachate sample will be a grab sample collected at the sanitary sewer manhole shown in **Figure 2.08c**.



**Operations and Maintenance Plan
Old Minot Landfill Superfund Site**

City of Minot, ND
CPS, Ltd.

Figure 2.08c: Leachate Sampling Location



The sampling methods are summarized in the QAPP.

Any proposal to discontinue leachate sampling must be first approved in writing by the EPA and NDDEQ prior to discontinuation of leachate sampling. No discontinuation is permissible until and unless EPA and NDDEQ have provided their written approval.

2.08d Groundwater Quality Reporting

The City must submit groundwater sampling and monitoring results annually to EPA and NDDEQ on or before March 1.

Reports must include the following:

- Summary of monitoring dates and locations;
- Summary of groundwater quality results;
- Summary of leachate quality and results; and
- Appended data for all chemical and physical analyses, including QA/QC data and water level measurements.

Any proposal to discontinue sampling and monitoring, in whole or in part, will be submitted to the EPA and NDDEQ to obtain approval prior to implementation. No discontinuation is permissible until and unless EPA and NDDEQ have provided their written approval.



**Operations and Maintenance Plan
Old Minot Landfill Superfund Site**

City of Minot, ND
CPS, Ltd.

3.00 CONTINGENCY PLAN

3.01 GENERAL

3.01a Contingency Plan Objective

This section presents potential additional response actions which may be necessary to meet the performance standards set forth in the ROD and ESDs and is therefore dubbed the Contingency Plan.

The purpose of the Contingency Plan is to:

- Identify occurrences at the Site such as natural disasters, vandalism, accidents, or failure of constructed design features that could lead to the release of solid waste, leachate, or gas which may in turn endanger human health or the environment.
- Establish the sequence and timing of response actions that would minimize hazards to human health or the environment.

Each contingency set forth herein has several possible solutions, and no contingency plan can directly address all circumstances encountered. Therefore, the City shall notify the EPA and NDDEQ of any incident within 12 hours of the incident, and regular discussions will be held on proposed actions and response status.

3.01b Records Storage and Access

A copy of this Contingency Plan will be kept at the following location at all times for reference by operations personnel and regulatory inspection personnel:

City of Minot
Public Works Department
1025 31st Street Southeast
Minot, ND 58701

The plan may be viewed by visiting or mailing a request to the City of Minot Public Works Department at the above address, via phone request to the City Utilities Director at (701) 857-4140, or via email request to PublicWorks@minotnd.gov.

3.02 EMERGENCY SERVICES

The Site is within a "911" service area. Ambulance service will be provided by the best available provider at the time of the emergency call.

At a minimum, on-site workers should have limited first aid and emergency equipment on-site for use during an emergency. The emergency equipment should consist mainly of first aid supplies and communication devices.

Two primary emergency scenarios may occur: fire and accidents. Both emergencies may vary in extent of damage. The City will specify a safety officer to act as a coordinator during an emergency.



**Operations and Maintenance Plan
Old Minot Landfill Superfund Site**

City of Minot, ND
CPS, Ltd.

Procedures to be followed during an emergency (fire or accident) are as follows:

1. Evaluate extent of fire/accident.
2. Call 911 (if necessary). Ensure access for emergency responders as applicable and appropriate.
3. Close off fire area.
4. Utilize on-site equipment or materials to contain fire and begin extinguishing fire.
5. Work with Minot Fire Department to extinguish fire.
6. Notify EPA and NDDEQ within 12 hours of the emergency.
7. Evaluate impact of fire on landfill integrity.

Emergency actions for releases of waste materials are described in the Contingency Plan.

3.03 POTENTIAL CONTINGENCIES

Certain events that may occur at the Site could lead to the release of waste, leachate, or gas into the environment. These events could be the result of natural disasters, accidents, vandalism, or failure of constructed design features, etc. The contingencies identified herein have been divided into three categories: event-triggered contingencies, inspection-triggered contingencies, and monitoring-triggered contingencies. All three categories are discussed below.

3.03a Event-triggered Contingencies

Event-triggered contingencies may include but are not limited to severe rainfall, flood, leachate treatment difficulty, grass fire, or other sudden, unanticipated events. **Table 3.03a** lists potential event-triggered contingencies and strategies to address them.

Table 3.03a: Event-Triggered Contingencies

Event-Triggered Contingency	Result	Trigger Point(s)	Action
(1) Severe Rainfall	Threatened Embankment Stability	Cracking of landfill cap other than apparent shrinkage cracks, subsidence in excess of one inch.	Notify; report; immediately assess damage visually; immediately place sandbags, soil fill or riprap to temporarily stabilize embankment; check for cracking and differential movement; evaluate condition and design and prepare permanent repair procedures report; implement recommendations.
	Erosion	Erosion of landfill cap in excess of three inches deep.	Notify; report; within five days place temporary erosion controls, such as hay bales, erosion control mats, silt fences, or mulch; assess damage; make permanent repairs.



**Operations and Maintenance Plan
Old Minot Landfill Superfund Site**

City of Minot, ND
CPS, Ltd.

		Damaged Surface Water Control	Breaches of surface water berms not able to be addressed by routing maintenance activities. inoperable drainage feature not able to be cleaned by routine maintenance activities.	Notify; report: within five days place sandbags, soil fill and/or temporary piping to make surface water controls temporarily functional; remove sediments from outlets; evaluate and make permanent repairs.
(2)	Grass/ Subsurface Fire	Damaged Vegetation, Waste Burning	Fire not immediately extinguishable	Notify; report: contact Minot Fire Department if necessary to extinguish fire; clear access roads for equipment access; immediately place soil over fire or use water to extinguish fire as appropriate; place temporary erosion controls; revegetate.
(3)	Wastewater Treatment Plant (WWTP) Treatment Difficulty	Potential for City WWTP Discharge to be Out of Compliance with NPDES Permit Discharge Limits	Noncompliant effluent monitoring results	Notify; report: measure/sample leachate drain discharge and determine if Site discharge is causing WWTP difficulties; evaluate options for additional monitoring or pretreatment; determine and implement appropriate follow-up action.
(4)	Explosion	Fire, Damage from Explosion	Explosion event	Notify; report; contact Minot Fire Department if necessary to extinguish fire, evaluate damage, determine and implement appropriate follow-up action.
(5)	Severe Odor Complaints	Uncomfortable Conditions for Nearby Residents	Actionable odor presence as verified by Minot First District Health Unit	Notify; report: contact First District Health Unit to perform site inspection; verify and determine significance of odors, and determine if odors are a short- or long- term problem; evaluate options for reduction of odors to acceptable levels; determine and implement appropriate follow-up action.
(6)	Vandalism	Potential for Hazards to	Vandalism resulting in unauthorized access or	Notify; report; perform appropriate temporary repairs as soon as possible to



**Operations and Maintenance Plan
Old Minot Landfill Superfund Site**

City of Minot, ND
CPS, Ltd.

Human Health or the Environment	exposure to health hazards	make the damaged system temporarily functional; implement permanent repairs as soon as practicable.
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Notes: *Notify - Action requires notification to EPA and NDDEQ within 7 days of the event-triggered contingency. Report - Action requires plan and schedule of proposed corrective measures to be prepared and submitted to NDDEQ and EPA within 14 days for review and approval unless other arrangements are agreed to upon notification.*

3.03b Inspection-triggered Contingencies

Inspection-triggered contingencies may include but are not limited to signs of distress in the landfill cap, unacceptable leachate head increase, surface drainage problems, or other visually-apparent items. **Table 3.03b** lists specific items to be checked during regular facility inspections and triggers for further action.

Table 3.03b: Inspection-Triggered Contingencies

Inspection-Triggered Contingency	Result	Trigger Point	Action
(1) Leachate Seepage at Four Known Historical Point Seeps (See Section 3.04c.5)	Continued Seepage at the Ground Surface	Notation of active seepage.	Notify; report; develop plan for installation of leachate collection system laterals; implement plan.
(2) Leachate Seepage in Previously Unidentified Location	Potential for Surface Water Contamination	Notation of active seepage.	Notify; report; immediately assess damage; within five days place temporary berm(s) to control seep; pump contaminated water to leachate drain; evaluate cause; design and implement permanent repairs.
(3) Leachate Head Increase	Potential for Leachate Seepage and Gas System Impairment	Leachate head in excess of 12 inches above invert of leachate collection system as measured semiannually at gas vents 1 & 8.	Notify; report; evaluate cause of leachate head buildup; determine and implement appropriate follow-up action.
(4) Erosion or Degradation of Cap	Increased Leachate Generation, Potential Surface Water Contamination	Notation of erosion or degradation not reparable	Notify; report; immediately assess damage; within two weeks place temporary erosion controls;



**Operations and Maintenance Plan
Old Minot Landfill Superfund Site**

City of Minot, ND
CPS, Ltd.

			by routine maintenance activities.	evaluate cause; design and implement permanent repairs.
(5)	Clogged Surface Water Controls	Erosion	Notation of clogged surface water controls not reparable by routine maintenance activities.	Notify; report; within five days place temporary erosion controls; remove cause of clogs; assess damage; repair erosion; evaluate design and make any needed changes; clean pipes and ditches as needed.
(6)	Leachate Drainage System Failure	Potential Groundwater Contamination	Notation of leachate accumulation in leachate sampling manhole.	Notify; report; evaluate impact; evaluate cause; repair or replace failing component and/or clean as appropriate.
(7)	Stressed Vegetation	Erosion	Notation of areas of stressed vegetation in excess of 50 square feet (SF) in size.	Notify; report; evaluate need for additional investigation to determine cause of stressed vegetation; determine and implement appropriate follow-up action.
(8)	Blocked or Improperly Functioning Gas Vents	Potential for Gas Contamination of Cap or Migration into Surrounding Subsurface Soils	Notation of blockage or improper function not reparable by routine maintenance activities.	Notify; report; evaluate impact; evaluate cause; repair or replace failing component and/or clean as appropriate.
(9)	Damaged or Improperly Functioning Wells or Piezometers	Potentially Inaccessible Monitoring Well or Piezometer	Notation of damage or improper function not reparable by routine maintenance activities.	Notify; report; assess damage; perform necessary repairs and maintenance.



**Operations and Maintenance Plan
Old Minot Landfill Superfund Site**

City of Minot, ND
CPS, Ltd.

(10) Uncontrolled Vegetative Growth	Potential for Increased Leachate Generation Due to Deep Root Penetration into Cap	Due to the nature of the native vegetation and the desire to maintain natural conditions, grass-type vegetation heights will not be limited. Tree growth to heights taller than the native vegetation will not be allowed.	Notify; report; mow or remove vegetative species and repair cap as necessary.
(11) Damage by Burrowing Animals	Potential for Increased Leachate Generation	Indication by pest control entity that burrowing is excessive.	Notify; report; fill burrows or holes in cap; evaluate need for site extermination.
(12) Excessive Settlement of Cap	Potential for Increased Leachate Generation from Depressions	Notation of settlement in excess of 6 inches deep and/or or in excess of 50 square feet (SF) in coverage area.	Notify; report; within two weeks fill depressions with additional soil and grade to drain; surface should include minimum of 6- inches of topsoil underlain by minimum of 12-inches of rooting soil material loosely placed; seed in accordance with approved seed mixture.

Note: Notify - Action requires notification to NDDEQ and EPA within 7 days of the inspection-triggered contingency. Report - Action requires plan and schedule of proposed corrective measures to be prepared and submitted to EPA and NDDEQ within 14 days for review and approval unless other arrangements are agreed to upon notification.

3.03c Monitoring-triggered Contingencies

Monitoring-triggered contingencies may include but are not limited to contamination of groundwater beyond action levels. **Table 3.03c** lists this potential monitoring triggered contingency.



**Operations and Maintenance Plan
Old Minot Landfill Superfund Site**

City of Minot, ND
CPS, Ltd.

Table 3.03c: Monitoring-Triggered Contingencies

Monitoring -Triggered Contingency	Result	Trigger Point	Action
(1) Exceedance of Groundwater Standard	Adverse Impact to Groundwater Quality	As Identified in Table 2.08c.	Notify; report.
(2) Exceedance of Gas Monitoring Standard	Adverse Impact to Air Quality	As Identified in Table 2.07b.4.	Notify; report.

Note: Notify - Action requires notification of the monitoring-triggered contingency within 7 days to EPA and NDDEQ. Report - Action requires plan and schedule of proposed corrective measures to be prepared and submitted to EPA and NDDEQ within 30 days for review and approval unless other arrangements are agreed to upon notification.

3.04 CORRECTIVE ACTIONS

3.04a Emergency Actions

Many of the event-triggered contingencies such as natural disasters, vandalism, fire, embankment failure, explosive hazards, or leachate spill may require an emergency response. Such responses typically need to be implemented immediately and may involve equipment and personnel beyond those routinely involved with facility operation. These additional resources could include city fire and police departments, and additional contractor equipment and personnel. The following paragraphs summarize the general emergency actions which may be necessary in response to each identified event-triggered contingency, excluding treatment difficulty and severe odor complaints which are subsequently discussed as a non-emergency event.

1. General

In the event of emergencies at the Site, City personnel must be contacted. The following is the key contact for the City for monitoring, operation, and maintenance at the Site:

City of Minot
Public Works Department
1025 31st Street Southeast
Minot, ND 58701
(701) 857-4140
PublicWorks@minotnd.gov

2. Equipment Availability

The City maintains several pieces of equipment which could be utilized for emergency action at the Site. A partial list of available equipment (as of March 2023) is:

- Various trucks
- Tractor backhoe
- Front-end loader
- Grader
- Flusher truck



Operations and Maintenance Plan Old Minot Landfill Superfund Site

City of Minot, ND
CPS, Ltd.

- Hydro-excavation equipment
- Skidsteer loader
- Air monitoring equipment
- Water sampling equipment

3. Severe Rainfall Emergency Response

Though historical 25-year storm events have not typically resulted in damage to the Site, this recurrence interval will serve as a benchmark for the requirement of additional Site inspections related to stormwater events. It is important to consider not only the amount of precipitation that falls, as a more intense precipitation event over a shorter duration may have the potential to result in equivalent or greater impacts than a precipitation event of longer duration and less intensity. Therefore, the following criteria based on National Oceanic and Atmospheric Administration (NOAA) Atlas 14 will be implemented as the events that will trigger additional inspections beyond those routinely performed:

- 25-year, 24-hour precipitation depth: Precipitation in excess of 3.74 inches over a 24-hour duration will trigger the requirement for additional inspection.
- 25-year, 60-minute precipitation intensity: Precipitation in excess of 1.87 inches in a 60-minute period will trigger the requirement for additional inspection.

The basis for requiring additional inspection will be precipitation published on the National Weather Service website. A rain gauge will also be maintained on site and will be used during supplemental inspections to verify precipitation amounts as feasible.

As soon as weather permits, the Park District shall inspect the Site to determine any damage to the vegetation, berms, cap, surface water controls, and monitoring systems. As may be necessary, the Park District may, among other necessary actions, place temporary erosion controls such as hay bales, soil fill, or mulch to minimize further erosion, place sandbags or riprap to stabilize facility features, and/or place sandbags and temporary piping to make surface water controls temporarily functional. Sediment may also require removal from berms, swales, and outlets. Sediment removal will be performed as necessary by the Park District.

4. Flood Emergency Response

Due to the relatively high elevation of the Site and absence of historical flooding of the Site during major area rainfall and flood events, flooding is not considered a likely contingency item. In addition, the entire site lies well outside the 100-year floodplain as published on FEMA FIRM panels 38101C0777D and 38101C0779D. Figure 3.04 below depicts the site location on aggregated FIRM panels.



Figure 3.04: FEMA FIRM and Floodplain Data



5. Explosive Conditions Emergency Response

In accordance with ND Admin. Code § 33.1-20-06.1-02(4), if methane gas levels exceed twenty-five percent of the lower explosive limit for methane in structures or appurtenances on the facility or if methane gas levels exceed the lower explosive limit for methane at the facility boundary, the City will take immediate action to protect public health. This may include installation of temporary controls to restrict access to various portions of the facility, temporary closure of the facility, and/or public notices, depending on the nature and severity of the event. The NDDEQ and EPA will be notified of the event within 12 hours of its discovery, and appropriate remedial measures will be implemented within 60 days of the discovery.

6. Air Quality, Water Quality Emergency Response

Immediately take action to protect public health, notify the NDDEQ and EPA within 12 hours of discovery, and implement remedial measures within 60 days.

If an air quality or water quality emergency includes a release or spill, contact the National Response Center at (800) 424-8802.

7. Grass Fire Emergency Response

Contact the Minot Fire Department for assistance. Clear all access roads of equipment to facilitate emergency vehicle access. Attempt to extinguish fire using water, fire extinguisher, or soil.



**Operations and Maintenance Plan
Old Minot Landfill Superfund Site**

City of Minot, ND
CPS, Ltd.

8. Vandalism Emergency Response

For acts of vandalism that create hazards to human health and the environment or otherwise impact the integrity of the remedy, appropriate temporary repairs should be performed as soon as possible to make the damaged system temporarily functional.

3.04b Follow-up to Emergency Actions

NDDEQ and EPA will be contacted within 12 hours of the occurrence.

As soon as possible following the occurrence and emergency response to an event requiring emergency actions, a detailed inspection of the affected areas will be performed by the City or its designated representative. The purpose of the inspection will be to assess the degree and extent of damage, if any, to the landfill cap, surface water controls, leachate drainage system, monitoring systems, access roads, fencing, etc. The extent of any damage will be described in detailed inspection notes and photographs.

Within seven days of the inspection, a brief report will be prepared by the City or its designated representative that describes the effects of damage, if any, on the intended purposes of the engineering features of the facility. The report will also identify repair procedures that generally will restore the features to their pre-damage condition. Upon its completion, the report and repair schedule will be submitted to the EPA and NDDEQ.

3.04c Events Not Requiring Emergency Action

Inspection-triggered and monitoring-triggered contingencies such as small cracks in embankments or the cap, a gradual embankment or cap movement trend, leachate seeps, leachate treatment difficulty, minor erosion, leachate head buildup, detects in leachate leak detection devices, surface drainage problems, and water quality violations generally will not require an emergency response. These contingencies may require interim response actions, continued or enhanced monitoring, assessment of the extent of the problem, and evaluation of the design prior to implementation of final repairs or remedial actions. The following paragraphs summarize non-emergency actions which may be necessary in response to specific event-, inspection-, and monitoring-triggered contingencies.

1. Ambient Air Quality

In accordance with ND Admin. Code § 33.1-20-06.1-02(4), if methane gas levels exceed twenty-five percent of the lower explosive limit for methane in structures or appurtenances on the facility or if methane gas levels exceed the lower explosive limit for methane at the facility boundary, the City will notify the EPA and NDDEQ within seven days.

The City will immediately take action to protect public health and implement remedial measures within 60 days.

2. Water Quality

The following discussion describes the general procedures to follow for actions related to water quality problems. The procedure is divided into two steps: the first step is verification of the problem; the second is the response to employ if the first step is indicative of a problem. Each problem has several possible solutions, and no contingency plan or action can directly address all circumstances encountered. Therefore, this plan is conceptual and flexible, to be used as a preliminary guide by all those associated with the initial response. The initial steps identified here will help define the plan of action to be followed for specific contingency occurrences. For the purposes of the City's responsibilities and obligations discussed below, the



Operations and Maintenance Plan Old Minot Landfill Superfund Site

City of Minot, ND
CPS, Ltd.

City may engage an outside contractor to complete the necessary responsibilities and obligations on its behalf.

- If a water quality action level defined by the ROD and ESD's performance standards is exceeded, the City shall notify the EPA and NDDEQ within 12 hours in writing and prepare and submit a plan with a schedule of proposed evaluation measures for review and approval, unless other arrangements are made with the EPA's and NDDEQ's approval.
- Check all sampling, sample handling, and analytical procedures to verify that proper techniques were used.
- Determine the potential implications of the elevated parameters by examining background and historical data, reviewing regional and time variations in water quality, and ascertaining if all monitoring points are showing elevated levels or if the occurrence is localized.
- If necessary, resample to verify results.
- If similar results are found from resampling, evaluate the results for potential impact to human health and the environment.
- Based on the significance of the results, determine if immediate action is needed or if continued or expanded monitoring is sufficient. (Expanded monitoring may include increasing the frequency of sampling.)
- Determine, if possible, the source of the problem and take mitigative/correction action, as appropriate.

During the time period covering the above actions, routine water monitoring will also continue according to the regular schedule discussed herein.

Once the above evaluation is complete and the conclusion is reached that a problem is occurring, the next step is to determine the nature and extent of that problem. This may be done by continuing to monitor the existing monitoring points or by installing additional monitoring points. The information gathered during this period of investigation will be submitted by the City to the EPA and NDDEQ in a report.

The result will then be used by the City to complete a feasibility study that will determine the remedial action needed, if any, to correct the problem. Examples of remedial actions, which may be selected individually or in combination, are:

1. Continuing the monitoring of groundwater and, if necessary, expanding the monitoring system.
2. Repairing the landfill cap or surface drainage features that have been identified as the cause of the problems.
3. Repairing or expanding the leachate drainage system in the fill area if it has been identified as the cause of the problem.
4. Installation of a groundwater extraction system and/or groundwater flow barrier.

3. Wastewater Treatment Plant Treatment Difficulty

The following discussion describes the general procedures the City shall follow for actions related to the City's WWTP treatment difficulty in meeting its NPDES permit discharge limits.

- If the City's WWTP reports difficulty in meeting its NPDES permit discharge limits and attributes the difficulty to the Site, the City shall notify the EPA and NDDEQ within 12 hours in writing and



Operations and Maintenance Plan Old Minot Landfill Superfund Site

City of Minot, ND
CPS, Ltd.

prepare and submit a plan, along with a schedule of proposed corrective measures to EPA and NDDEQ for review and approval, unless other arrangements are made with the EPA's and NDDEQ's approval.

- The City shall measure flows and water quality at the Site discharge to sanitary sewer in a manner recommended by the WWTP and evaluate the possibility that difficulty in meeting NPDES discharge limits is not due to the Site discharge.
- Based on the significance of the results, the City shall determine if immediate action or additional monitoring is needed.
- If it is determined that the difficulty is due to the Site discharge and that monitoring alone is not sufficient, the City shall evaluate pretreatment options for continuing the discharge to the sanitary sewer, or alternative treatment and discharge methods.

During the time period covering the above actions, leachate will continue to be discharged to the sanitary sewer as originally designed.

The results of the above actions will be used by the City to complete a feasibility study that will determine the remedial action needed, if any, to correct the problem. Examples of remedial actions, which may be selected individually or in combination, are:

1. Routine monitoring of leachate discharge.
2. Leachate pre-treatment at the Site prior to discharge to sanitary sewer.
3. Installing valve at discharge to sanitary sewer to limit flows.

4. Severe Odor Complaints

The following discussion describes the general procedures the City shall follow for actions related to severe odor complaints from the Site.

- If nearby residents adjacent to the landfill report severe odor problems, the City shall notify the EPA and NDDEQ within 12 hours in writing and prepare and submit a plan with a schedule of proposed evaluation measures to the EPA and NDDEQ for review and approval unless other arrangements are made with the EPA's and NDDEQ's approval.
- The City shall contact First District Health Unit to perform an inspection to verify odors and determine their significance by inspecting the area of complaints and performing interviews to determine if odors are isolated events or a repetitive problem.
- The City, with assistance from First District Health Unit as necessary, shall determine if odor problems are short-term occurrences resulting from evolving landfill conditions or a long-term occurrence.
- If odors are determined to be a repetitive problem and are determined to be a significant long-term occurrence, the City shall determine if immediate action is required and evaluate options for minimizing or eliminating the odor problems.

During the time period covering the above actions, the gas venting system will continue to operate as originally designed.



**Operations and Maintenance Plan
Old Minot Landfill Superfund Site**

City of Minot, ND
CPS, Ltd.

If necessary, the results of the above actions will be used by the City to complete a feasibility study that will determine the remedial action needed, if any, to correct the problem. Examples of remedial actions, which may be selected individually or in combination, are:

1. Removing wind turbines and installing inverted vent outlets.
2. Installing an active gas system to collect the gases and discharge them from a tall stack.
3. Utilizing a commercial-grade deodorizer.
4. Implementing a telephone hotline number to call and submit complaints.

5. Leachate Seeps

Historically four leachate seeps have been detected. Those seeps were monitored for the first year after discovery. The leachate drain system eventually reduced the leachate level as designed, and the seeps dried up. In the event new seeps emerge:

- Seeps would be monitored monthly for one year after discovery.
- If the newly discovered seeps remain active after one year of monitoring, additional laterals may be added to the leachate drain system to enhance leachate draining in the vicinity of the seep.

3.05 CONTINGENCY REPORTING

In general, whenever a contingency as outlined in **Tables 3.03a, 3.03b** and **3.03c** occurs at the Site, the City is to provide the EPA and NDDEQ with timely written notice and reporting of the contingency as follows:

The City shall notify the EPA and NDDEQ in writing within seven days of City's discovery of the following events:

- Detection of chemicals or chemical concentrations or other factors that may prevent the RA from meeting performance standards specified in the ROD and ESDs.
- Noncompliance of the RA with performance standards specified in the ROD and ESDs.
- Indications that the RA is not performing as designed and, therefore, requires corrective measures, and
- Detection of chemicals or chemical concentrations in excess of the performance standards.

Within 14 days of any of the above specified events, the City shall submit a plan and schedule to the EPA and NDDEQ for the proposed corrective measures for review and approval. The City shall also submit a work plan to the EPA and NDDEQ for the specific evaluation and/or corrective measures. The EPA and NDDEQ shall review and approve such submissions in accordance with **Section XII in the Consent Decree**.

3.06 AMENDMENT OF CONTINGENCY PLAN

A modified contingency plan will be prepared and submitted to the EPA and NDDEQ whenever the operation or maintenance of the Site changes or when a release at or failure of the Site occurs that indicates revised procedures are necessary.



**Operations and Maintenance Plan
Old Minot Landfill Superfund Site**

City of Minot, ND
CPS, Ltd.

4.00 REFERENCES

Remedial Investigation Report, Old Minot Landfill Superfund Site, Volumes 1 through 4. Donohue, February 1992.

Feasibility Study Report, Old Minot Landfill Superfund Site. Donohue, August 1992.

Record of Decision. EPA, June 1993.

Kickoff Meeting Minutes for January 23, 1996 Meeting Between the City of Minot, EPA, NDDH and Wenck. Wenck, 1996.

Consent Decree (including the Statement of Work which is an appendix to the Consent Decree). United States of America and City of Minot, February 7, 1996.

Remedial Design Report, Old Minot Landfill Superfund Site. Wenck, April 1996.

Explanation of Significant Differences. EPA, April 10, 1996.

Health and Safety Plan. Wenck, May 1996.

Monitoring, Operations and Contingency Plan; Old Minot Landfill Superfund Site. Wenck, October 1996.

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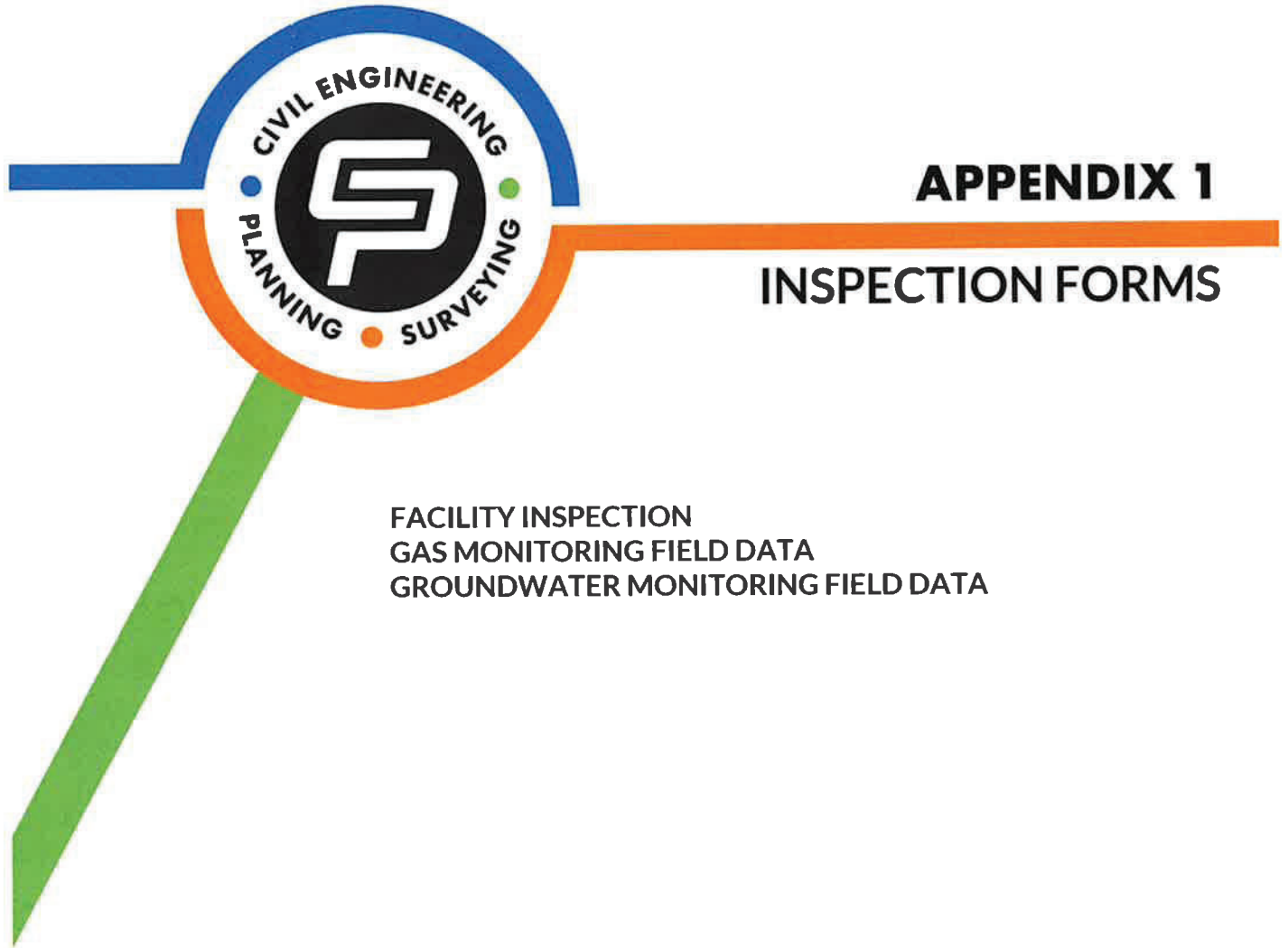
Maysa MSW Facility Minot, ND Work Plan for Passive Recreation Use of Property. Ackerman-Estvold, March 2023.

North Dakota Solid Waste Management Rules. NDDEQ, Updated March 2023.

Reuse Workplan

Quality Assurance Project Plan

Health and Safety Plan



APPENDIX 1

INSPECTION FORMS

**FACILITY INSPECTION
GAS MONITORING FIELD DATA
GROUNDWATER MONITORING FIELD DATA**



**Operations and Maintenance Plan
Old Minot Landfill Superfund Site**

City of Minot, ND
CPS, Ltd.

OLD MINOT LANDFILL SUPERFUND SITE INSPECTION

To be completed monthly, March through October of each year.

Date:

Time:

Temperature/Weather Comments:

Name of Person Performing Inspection:

Park District Monthly Site Inspection Items

- | | |
|--|---|
| 1. Signs of Vandalism?
(locks intact, holes in fence, etc.)
Action Taken: | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |
| 2. Uncontrolled vegetative growth?
(Trees, Noxious weeds, etc.)
Action Taken: | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |
| 3. Excessive erosion on landfill cap?
Action Taken: | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |
| 4. Excessive rutting or lack of vegetation on trail areas?
Action Taken: | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |
| 5. Damage or indication of the presence of rodents or burrowing animals?
Action Taken: | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |
| 6. Stressed vegetation?
Action Taken: | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |
| 7. Excessive settlement of landfill cap?
Action Taken: | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |
| 8. Leachate seepage on or around the landfill cap, including well abandonment locations within the landfill waste boundaries?
Action Taken: | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |
| 9. Groundwater monitoring wells not intact or unlocked?
Action Taken: | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |
| 10. Blocked or improperly functioning stormwater drainage structures?
(examples: catch basins, culverts, ditches)
Action Taken: | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |
| 11. Blocked or improperly functioning gas vents?
Action Taken: | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |
| 12. Compromised integrity of fence and locking gates?
(pay special attention to areas where erosion may displace fenceposts)
Action Taken: | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |
| 13. Additional Items of Note, Comments, and Additional Actions Taken: | |



**Operations and Maintenance Plan
Old Minot Landfill Superfund Site**

City of Minot, ND
CPS, Ltd.

City of Minot Periodic Inspection Items

- | | |
|---|---|
| <p>1. Stressed vegetation?
<i>(check semiannually in March and October)</i>
Action Taken:</p> | <p><input type="checkbox"/>Yes <input type="checkbox"/>No <input type="checkbox"/>N/A</p> |
| <p>2. Excessive settlement of landfill cap?
<i>(check semiannually in March and October)</i>
Action Taken:</p> | <p><input type="checkbox"/>Yes <input type="checkbox"/>No <input type="checkbox"/>N/A</p> |
| <p>3. Leachate seepage on or around the landfill cap, including well abandonment locations within the landfill waste boundaries?
<i>(check semiannually in March and October)</i>
Action Taken:</p> | <p><input type="checkbox"/>Yes <input type="checkbox"/>No <input type="checkbox"/>N/A</p> |
| <p>4. Blocked or improperly functioning leachate drain?
<i>(check during annual groundwater sampling)</i>
Action Taken:</p> | <p><input type="checkbox"/>Yes <input type="checkbox"/>No <input type="checkbox"/>N/A</p> |
| <p>5. Damaged or improperly functioning groundwater wells?
<i>(check during annual groundwater sampling in May)</i>
Action Taken:</p> | <p><input type="checkbox"/>Yes <input type="checkbox"/>No <input type="checkbox"/>N/A</p> |
| <p>6. Blocked or improperly functioning gas vents?
<i>(check during gas sampling in April, July, and October)</i>
Action Taken:</p> | <p><input type="checkbox"/>Yes <input type="checkbox"/>No <input type="checkbox"/>N/A</p> |
| <p>7. Additional Items of Note, Comments, and Additional Actions Taken:</p> | |



**OLD MINOT LANDFILL SUPERFUND SITE
GAS MONITORING FIELD DATA**

To be completed in April, July, and October of each year.

BEGIN AT THE MOST UPWIND VENT AND PROCEED DOWNWIND THROUGH ALL 8 GAS VENT EXTERIORS, THEN TO THE LEACHATE MANHOLE, THEN TO GAS VENT INTERIORS FROM UPWIND TO DOWNWIND.

Date:	Time Started:
Name of Person Performing Inspection:	Time Finished:

Weather Data (as reported on the National Weather Service website):

- Precipitation in Progress Yes No
- Wind Speed _____ mph
- Wind Direction _____°
- Cardinal Direction Degrees (N = 0°, E = 90°, S = 180°, W = 270°)
- Barometric Pressure _____ in Hg
- Temperature _____°F
- Wind Chill _____°F
- Cloud Cover Estimated _____%
- Humidity _____%
- Dewpoint _____°F
- Visibility _____ mi

NOTE:

TO PROCEED WITH SAMPLING AT EACH LOCATION:

- **NO PRECIPITATION CAN BE IN PROGRESS**
- **WIND SPEED MUST BE 15 MPH OR LESS**
- **BAROMETRIC PRESSURE MUST BE BETWEEN 29 AND 31 IN Hg**

IF THESE CONDITIONS ARE NOT MET, RESCHEDULE SAMPLING FOR NEXT BUSINESS DAY THAT FORECAST WEATHER CONDITIONS ARE SUITABLE.

IF REQUIRED WEATHER CONDITIONS ARE MET, PERFORM REQUIRED GAS MONITORING AT ALL 8 GAS VENT EXTERIORS, PROCEEDING FROM THE MOST UPWIND VENT TO THE MOST DOWNWIND VENT, THEN TO THE LEACHATE MANHOLE, THEN TO INTERIORS OF GAS VENTS FROM UPWIND TO DOWNWIND.

For ambient air readings, take position on the ground directly downwind of the gas vent and procure readings for the listed parameters with the meter located as close to the vent as possible, at a height of approximately five feet above the ground. For leachate manhole and interiors of gas vents, procure readings at least three feet down inside the structure.

Gas Vent Number or Leachate Manhole:	<input type="checkbox"/> Interior <input type="checkbox"/> Exterior
Methane Concentration (%):	
Carbon Dioxide Concentration (%):	
Carbon Monoxide Concentration (%):	
Hydrogen Sulfide Concentration (%):	
Oxygen Concentration (%):	

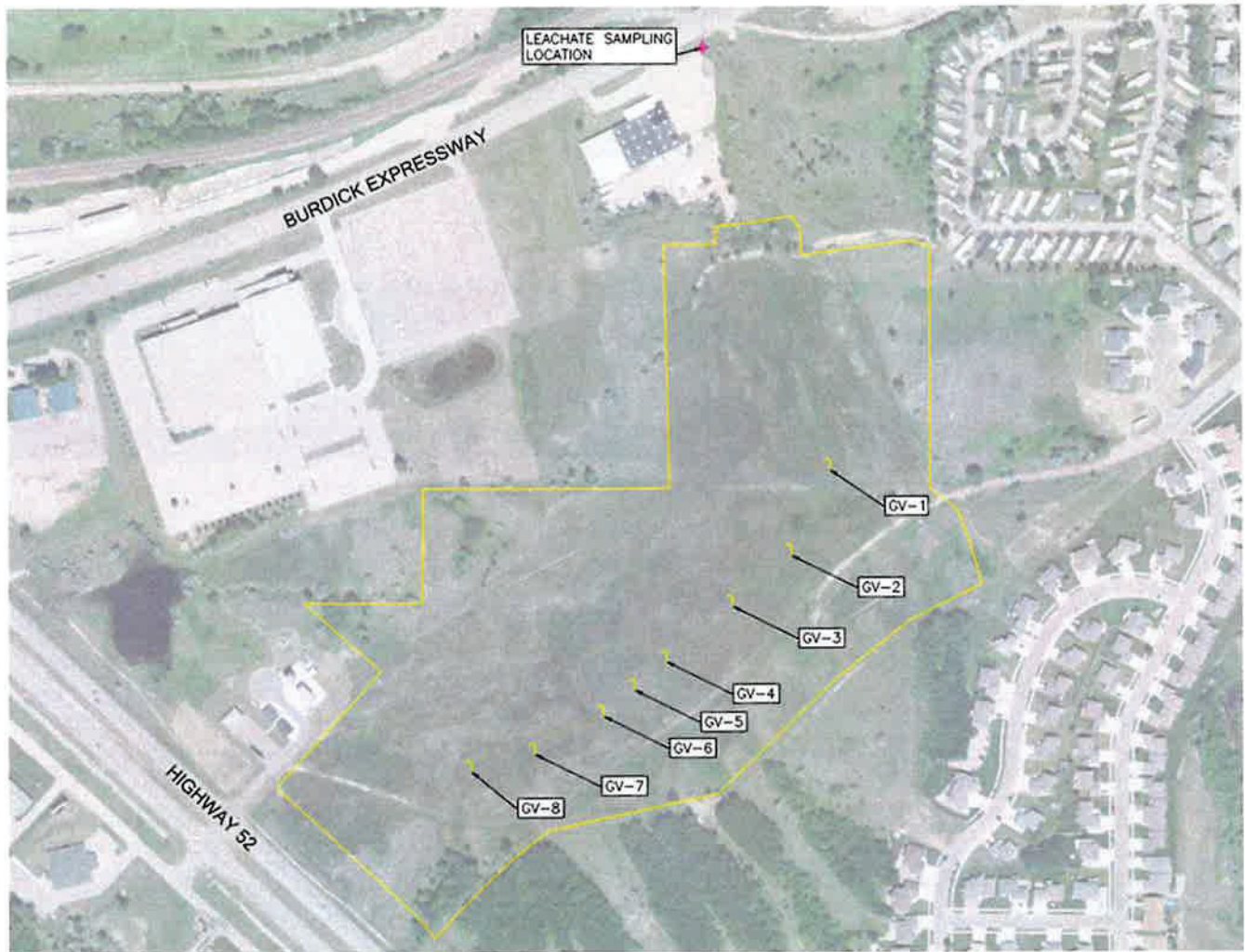
Were any of the above concentrations within the actionable range (see table on following page)? Yes No



**Operations and Maintenance Plan
Old Minot Landfill Superfund Site**

City of Minot, ND
CPS, Ltd.

Parameter	Actionable Range in Ambient Air / Gas Vent Exterior (%)	Actionable Range in Gas Vent Interior (%)	Actionable Range in Manhole (%)
Methane	>1.25	1.25-15	>1.25
Carbon Dioxide (CO ₂)	>3	N/A	N/A
Carbon Monoxide (CO)	>0.02	N/A	N/A
Hydrogen Sulfide (H ₂ S)	Detectable by Meter	1-44	>1
Oxygen (O ₂)	N/A	N/A	N/A





**Operations and Maintenance Plan
Old Minot Landfill Superfund Site**

City of Minot, ND
CPS, Ltd.

**OLD MINOT LANDFILL SUPERFUND SITE
GROUNDWATER MONITORING FIELD DATA**

To be completed annually in May of each year in addition to laboratory / field sampler's standard field data form.

Name of Person Performing Inspection:

Date:

Weather Data (as reported on the National Weather Service website):

- Temperature ____°F
- Cloud Cover Estimated ____%
- Humidity ____%
- Wind Direction ____
- Cardinal Direction Degrees (N = 0°, E = 90°, S = 180°, W = 270°)
- Wind Speed ____mph
- Barometric Pressure ____in Hg
- Dewpoint ____°F
- Visibility ____mi
- Wind Chill ____°F

**SAMPLE WELLS IN ORDER OF POTENTIALLY INCREASING CONTAMINATION
AS DETERMINED BY THE RESULTS OF THE PREVIOUS MONITORING EVENT.
UNLESS SAMPLING RESULTS DICTATE A CHANGE, THE SAMPLING ORDER WILL BE:
OW-MW-1, OW-101-A, OW-102-A, OW-107-A, OW-105-A, OW-103-A, OW-104-A, LEACHATE**

Number wells in order of prescriptive sampling order, first to last:

- _____ OW-MW-1
- _____ OW-101-A
- _____ OW-102-A
- _____ OW-103-A
- _____ OW-104-A
- _____ OW-105-A
- _____ OW-107-A
- _____ 8 Leachate Manhole

Well:

Time:

Is well damaged, blocked, or improperly functioning? Yes No If yes, explain:

Water Level Prior to Sampling (ft):

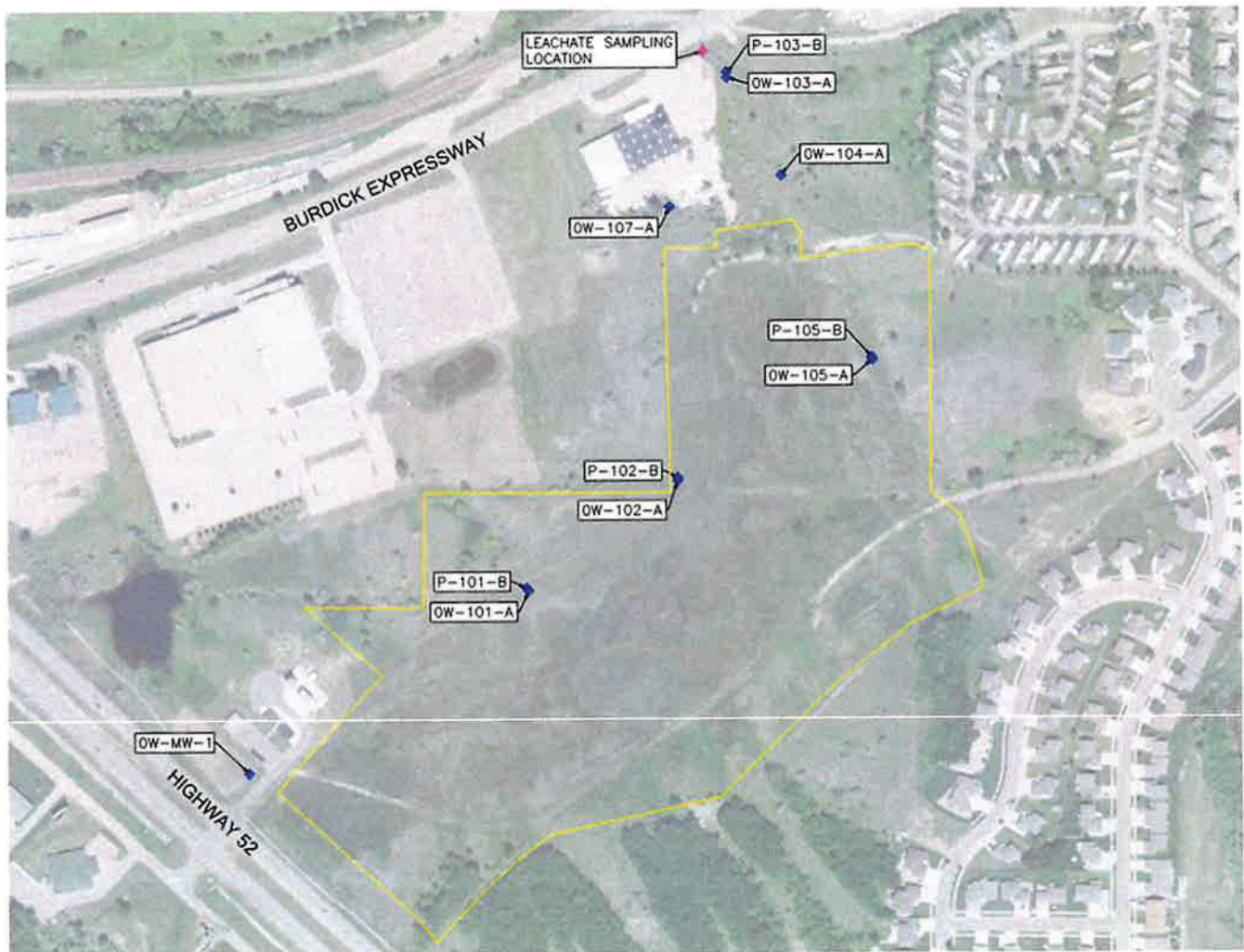
Procure applicable samples to perform laboratory tests as indicated for the applicable parameters on the following page.



**Operations and Maintenance Plan
Old Minot Landfill Superfund Site**

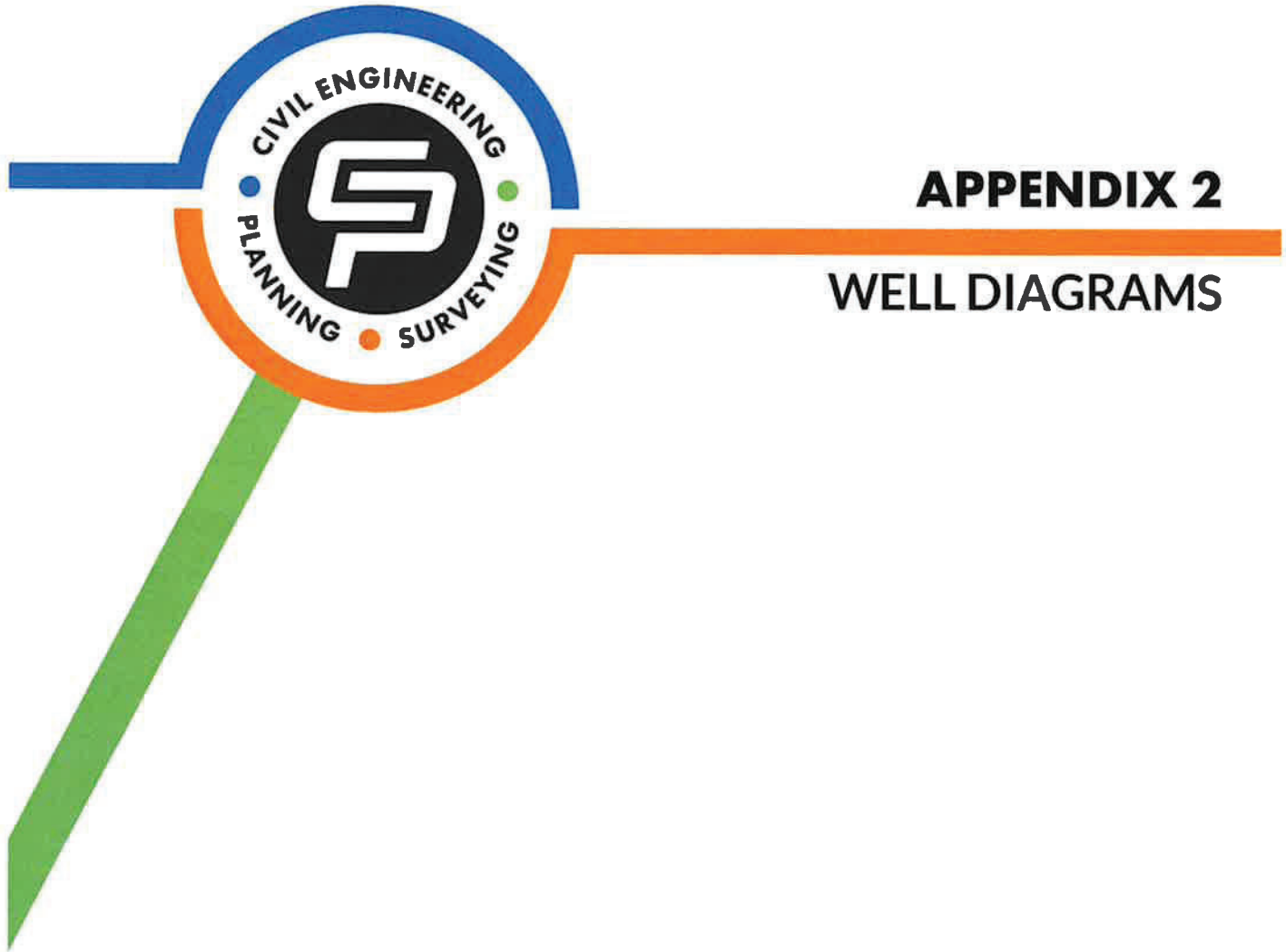
City of Minot, ND
CPS, Ltd.

Grouping	Analyte	Analytical Method	Proposed Minimum Detection Limits (ug/L)	Performance Standards (ug/L)		
				MCL ⁽¹⁾	MCLG ⁽²⁾	SMC ⁽³⁾
Benzene & Compounds	Benzene	EPA 8260	0.3	5	0	--
	Toluene	EPA 8260	0.8	1,000	1,000	--
	t-1,2-Dichloroethene	EPA 8260	1.0	100	100	--
Halogenated Aliphatics	Tetrachloroethene	EPA 8260	0.5	5	0	--
	Vinyl Chloride	EPA 8260	0.5	2	0	--
Inorganics	Barium	EPA 200.7	10	2,000	2,000	--
	Chromium	EPA 200.7	50	100	100	--
	Copper	EPA 200.7	50	--	1,300	1000
	Zinc	EPA 200.7	50	--	--	5,000



**Operations and Maintenance Plan
Old Minot Landfill Superfund Site**

City of Minot, ND



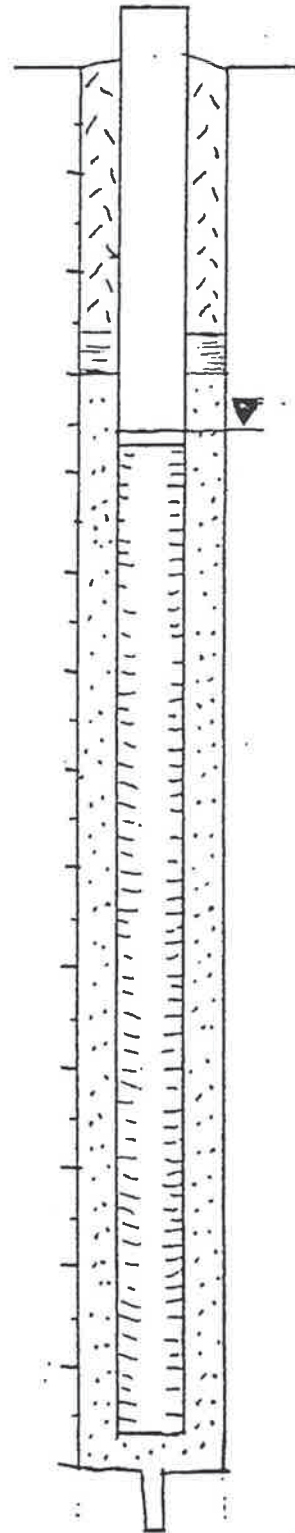
APPENDIX 2
WELL DIAGRAMS

WELL/PIEZOMETER COMPLETION DIAGRAM

Project Old Minot Landfill TDD No. R8-8605-04
 Location Minot along Hwy 2852 right-of-way Well Number OM-MW-1
 Geologist Dennis Elrod Date(s) of Installation 06-04-86
 Depth to Water 7.1 feet (G.L.) Elevation from Measuring Point Not measured

Depth (ft.)

2
4
6
8
10
12
14
16
18
20
22
24
26
28
30



DRILLING SUMMARY:

Driller Water Supply, Inc.
 Rig Type Mobile B-40
 Drilling Method Hollow stem auger
 Bit(s) Teeth
 Drilling Fluid None
 Surface Casing 4" steel
 Hollow Stem/Drive Casing I.D. (in.) 4"
 Total Depth of Boring (ft.) 29.5'
 Borehole Diameter (in.) 8"

WELL DESIGN:

Completion Above Grade X Below Grade _____
 Basis: Geological Log X Geophysical Log NONE
 Type _____
 Total Depth of Well (ft.) 27.4
 Casing String(s): C-casing S-screen
+2.5' above GL 7.4 C _____
7.4' - 27.4 S _____
 Casing: Timco schedule 80 PVC 2" dia.
 Screen: 2 10' lengths PVC, 0.10 slot 2" dia.
 Centralizers none
 Gravel/Sand Pack 6.0 to 28.0 feet
10 mesh silica sand
 Bentonite Seal(s) 5.0 to 6.0 feet
 to _____ feet
 Bentonite (type) Enviroplug pellets Wyo-Ben, Inc.
 Backfill (cuttings) _____ to _____ feet
 Cement Seal(s) 0.0 to 5.0 feet
 to _____ feet
 Cement Composition Portland Dakota Type II with 5% bentonite powder
 Protective Casing +2.5 to -0.5 feet
 Protective Casing Type Brainard-Kilman type design

Other 80 gallons water from municipal supply during installation. Removed during development
 WELL DEVELOPMENT:

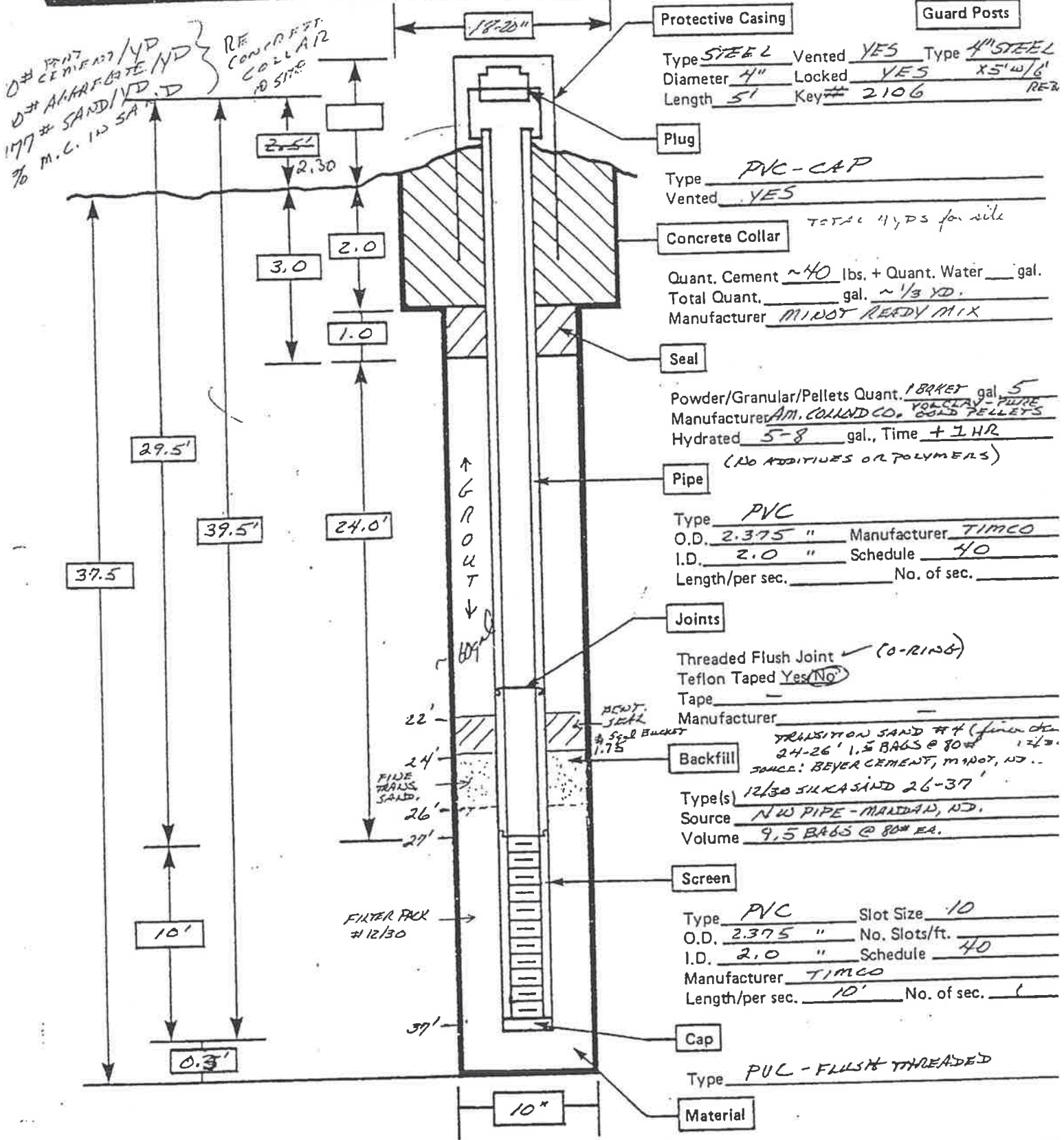
Method Air Lifting with 150 cfm compressor, 1/2" tubing w/oil filter and jetting tool.
 Duration 2 1/2 min Estimated production See below gpm
 Water Appearance Sediment reduced, silt slight at end of development
 Remarks: Production 1.05 gpm during first 10 minutes:
0.59 gpm during first 57 min
0.21 after 3 hours development

Donohue

OBSERVATION WELL INSTALLATION DIAGRAM

Well No. OW-101-A

Site: OLD MINOT LF Date: 5/8/91
 By: BORLIN/S. PETTIT Project No. 42429.001



Protective Casing	Type <u>STEEL</u> Vented <u>YES</u> Type <u>4" STEEL</u>
	Diameter <u>4"</u> Locked <u>YES</u> <u>X5' W/6"</u>
	Length <u>5'</u> Key# <u>2106</u> <u>RE-2</u>
Plug	Type <u>PVC-CAP</u>
	Vented <u>YES</u>
Concrete Collar	Quant. Cement <u>~40</u> lbs. + Quant. Water <u> </u> gal.
	Total Quant. <u> </u> gal. <u>~1/3 YD.</u>
	Manufacturer <u>MINOT READY MIX</u>
Seal	Powder/Granular/Pellets Quant. <u>1 BUCKET gal. 5</u>
	Manufacturer <u>AM. COLLARD CO. VOLCLAY-PIUTE</u>
	Hydrated <u>5-8</u> gal., Time <u>+ 1 HR</u>
	(NO ADDITIVES OR POLYMERS)
Pipe	Type <u>PVC</u>
	O.D. <u>2.375 "</u> Manufacturer <u>TIMCO</u>
	I.D. <u>2.0 "</u> Schedule <u>40</u>
	Length/per sec. <u> </u> No. of sec. <u> </u>
Joints	Threaded Flush Joint <u>(O-RINGS)</u>
	Teflon Taped <u>Yes/No</u>
	Tape <u> </u>
	Manufacturer <u> </u>
Backfill	Type(s) <u>12/30 SILICA SAND 26-37</u>
	Source <u>NW PIPE - MAIDAN, ND.</u>
	Volume <u>9.5 BAGS @ 80# EA.</u>
Screen	Type <u>PVC</u> Slot Size <u>10</u>
	O.D. <u>2.375 "</u> No. Slots/ft. <u> </u>
	I.D. <u>2.0 "</u> Schedule <u>40</u>
	Manufacturer <u>TIMCO</u>
	Length/per sec. <u>10'</u> No. of sec. <u>1</u>
Cap	Type <u>PVC - FLUSH THREADED</u>
Material	<u>10"</u>

Notes: Water Source MINOT WTR. SYSTEM
 S.S. SAMPLE @ 29-30' BLVD. 6, 10, 12 - CONFIRMS SB-101 LOG SAND TO SI; SET SCR. @ 27-37' AS PLANNED
 NOTE: 3/4" ID HSA USED FOR PILOT HOLE DRILLING; S.S. SAMPLES; 6/4" I.D. HSA USED FOR WELL INSTALLATION

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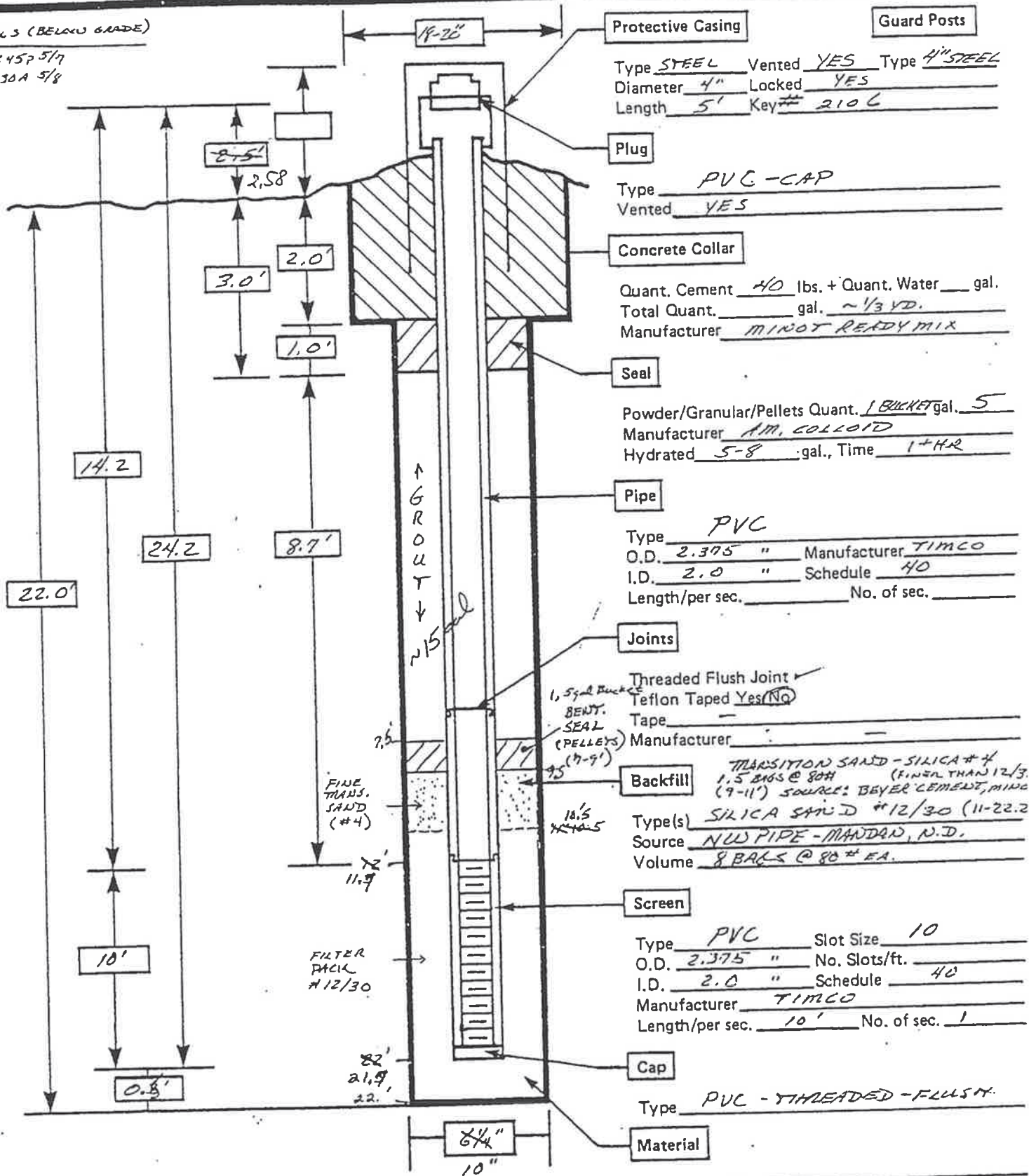
OBSERVATION WELL INSTALLATION DIAGRAM

Well No. 001-K2-R

Site: OLD MINOT LF Date: 5/7/91
 By: BRUCE ENS. / S. PETTY Project No. 42427.001

1. LULS (BELOW GRADE)

- 2 4:45P 5/7
- 3 8:30A 5/8



Notes: Water Source MINOT WTR. SYSTEM
5.5. SAMPLES @ 12-14' AND 18-20' CONFIRM SAND LENSES IN SB-102 ; SET SCREEN
12-22 FT. AS PLANNED
 NOTE: 3/4" ID HSA USED FOR PILOT HOLE DRILL. & SS SAMPLG.; 6 1/4" I.D. HSA USED FOR WELL INST

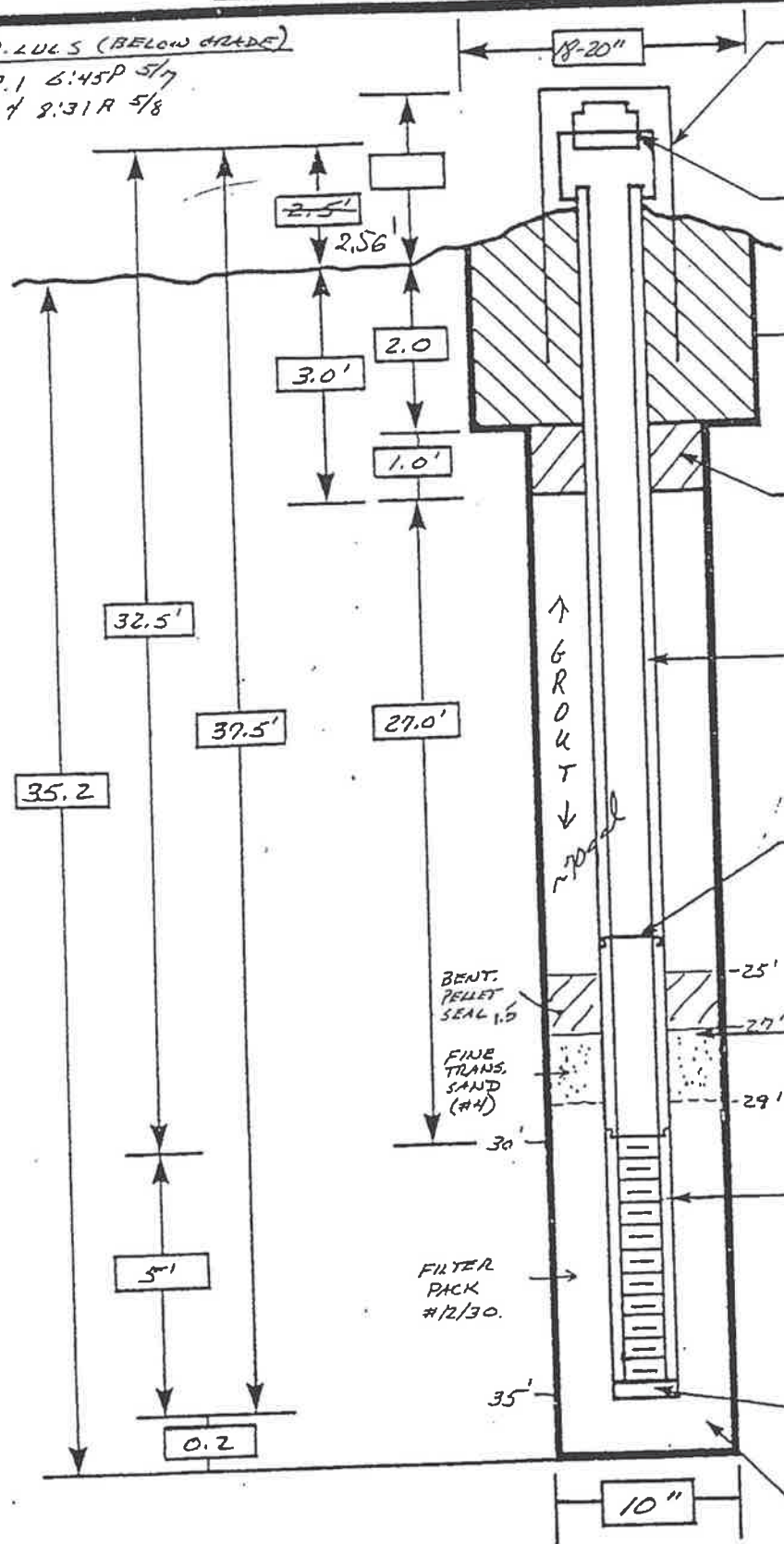
Donohue

OBSERVATION WELL INSTALLATION DIAGRAM

Well No. P-102-B

Site: OLD MINGOT LF Date: 5/7/91
 By: BRAUN / S. PETTY Project No. 42427.001

WTR. LVL. S (BELOW GRADE)
39.1 6:45P 5/7
18.4 2:31R 5/8



- Protective Casing**
 Type STEEL Vented YES Type 4" STEEL
 Diameter 4" Locked YES
 Length 5' Key # 2106
- Plug**
 Type PVC - CAP
 Vented YES
- Concrete Collar**
 Quant. Cement ~40 lbs. + Quant. Water gal.
 Total Quant. gal. ~ 1/3 YD.
 Manufacturer MINOT READY MIX
- Seal**
 Powder/Granular/Pellets Quant. 1 BUCKET gal. 5
 Manufacturer A.M. COLLOID
 Hydrated 5-8 gal., Time 1 HR +
- Pipe**
 Type PVC
 O.D. 2.375 " Manufacturer TIMCO
 I.D. 2.0 " Schedule 40
 Length/per sec. 10' No. of sec. 3
5' 1
- Joints**
 Threaded Flush Joint
 Teflon Taped Yes/No
 Tape
 Manufacturer
- Backfill**
 Type(s) TRANSITION SAND - SILICA #4
(29'-29') 1 BAG (FINER THAN #12)
 Source: BEYERCEMENT, MINOT, N.D.
- Screen**
 Type(s) SILICA SAND #12/30 (29-35)
 Source NOV PIPE, MAUNSDAN, N.D.
 Volume 4 BAGS @ 80# EA.
(SOME NATURAL BACKFILL IN FILTER PACK DUE TO CAVING)
- Screen**
 Type PVC Slot Size 10
 O.D. 2.375 " No. Slots/ft.
 I.D. 2.0 " Schedule 40
 Manufacturer TIMCO
 Length/per sec. 5' No. of sec. 1
- Cap**
 Type PVC - THREADED - FLUSH
- Material**
 Type

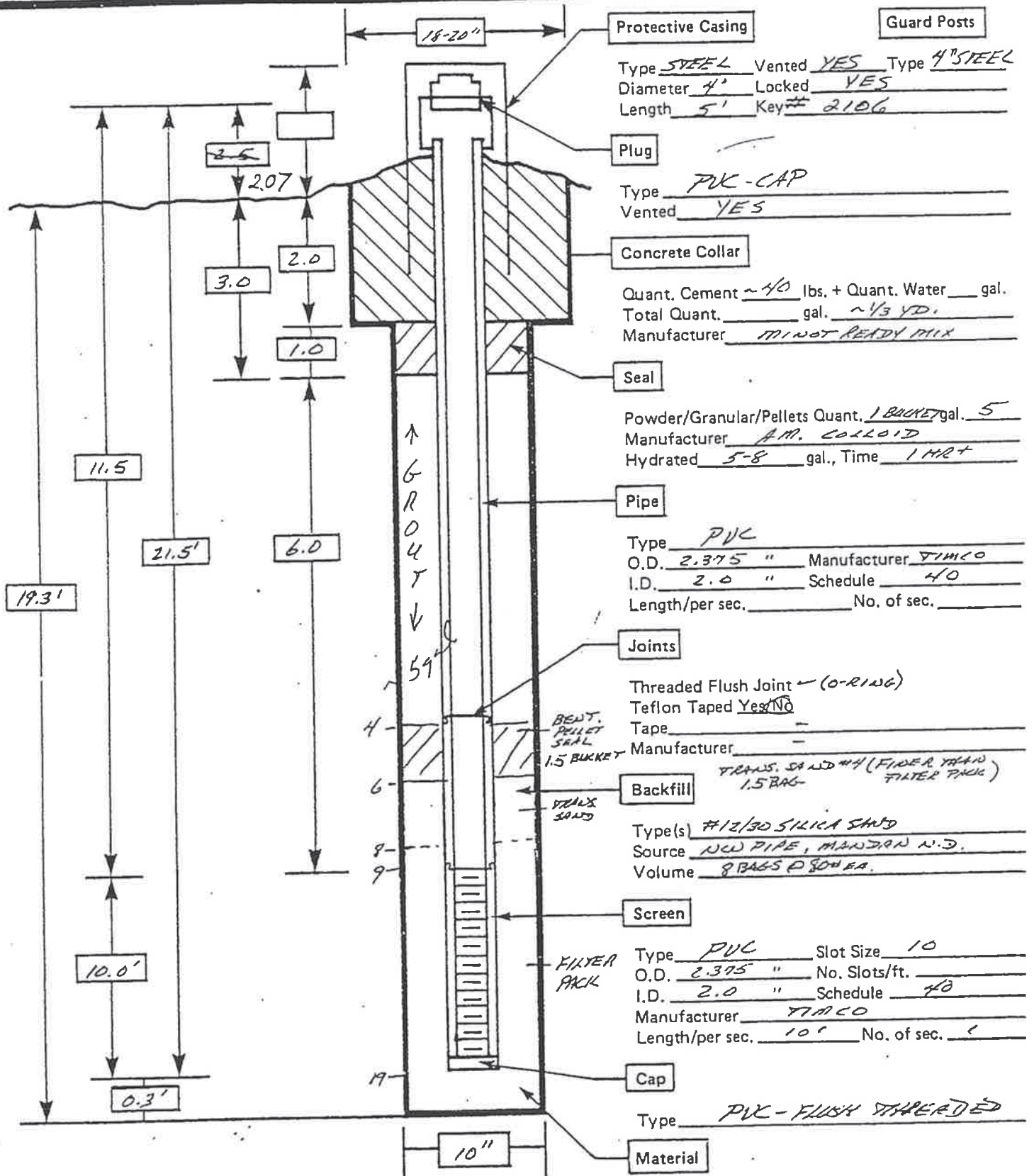
Notes: Water Source MINOT WTR. SYSTEM
S.S. SAMPLES @ 32'-34' SAND FIRM SAND - WILL SET SCRN. 30-35' AS PLANNED
2 1/4" HSA USED FOR PILOT HOLE DRILLG. & S.S. SAMPLG.; 6 1/4" I.D. HSA USED FOR WELL INSTALLATION.

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OBSERVATION WELL INSTALLATION DIAGRAM

Well No. 00-103-R

Site: OLD MINOT LF Date: 5/13/91
 By: BROWN/S. PETTIT Project No. 42427.001



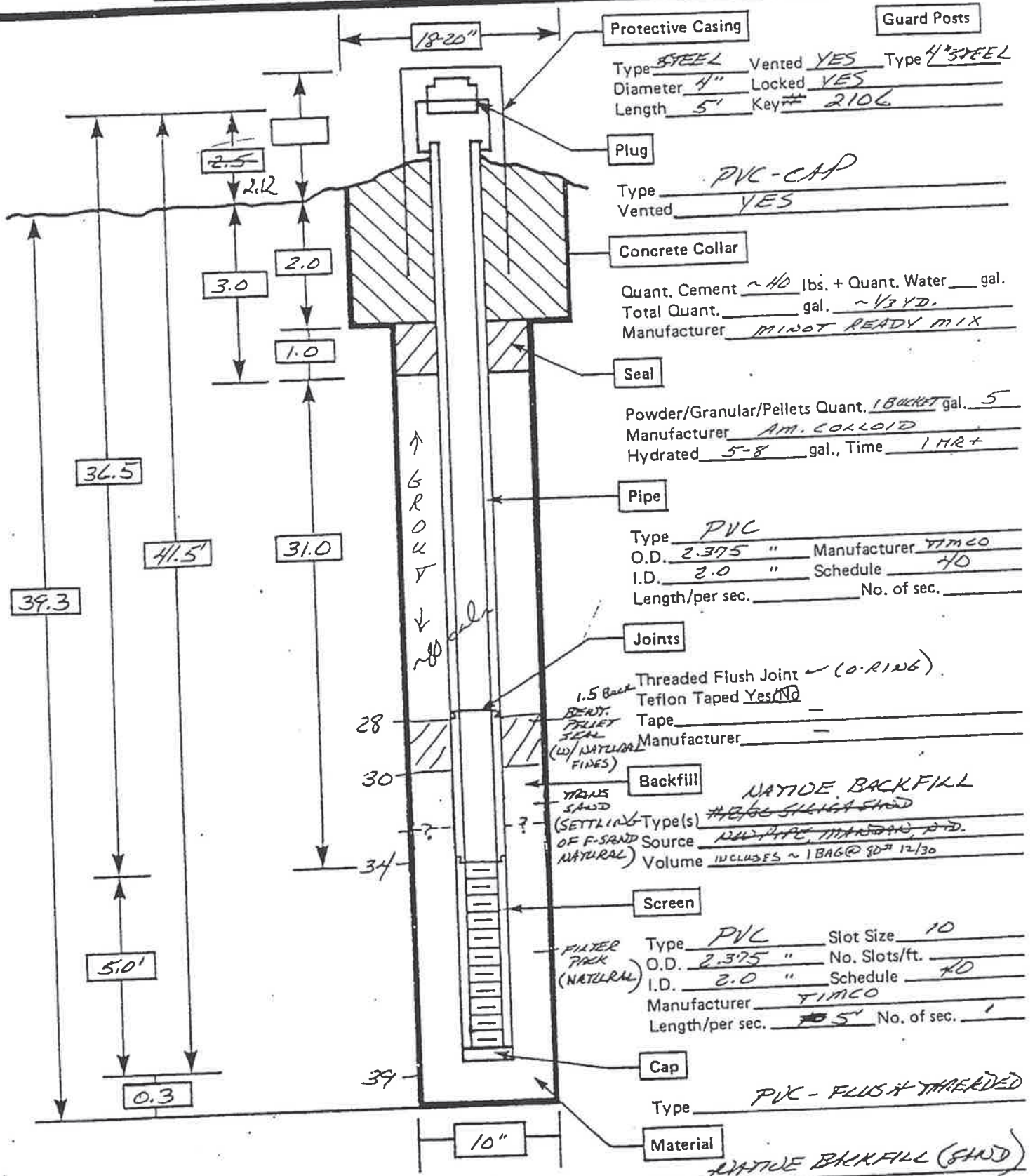
Notes: Water Source MINOT WTR. SYSTEM

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OBSERVATION WELL INSTALLATION DIAGRAM

Well No. P-103-B

Site: OLD MINOT LF Date: 5/13/91
 By: DONALD S. PETTIT Project No. 42427.001



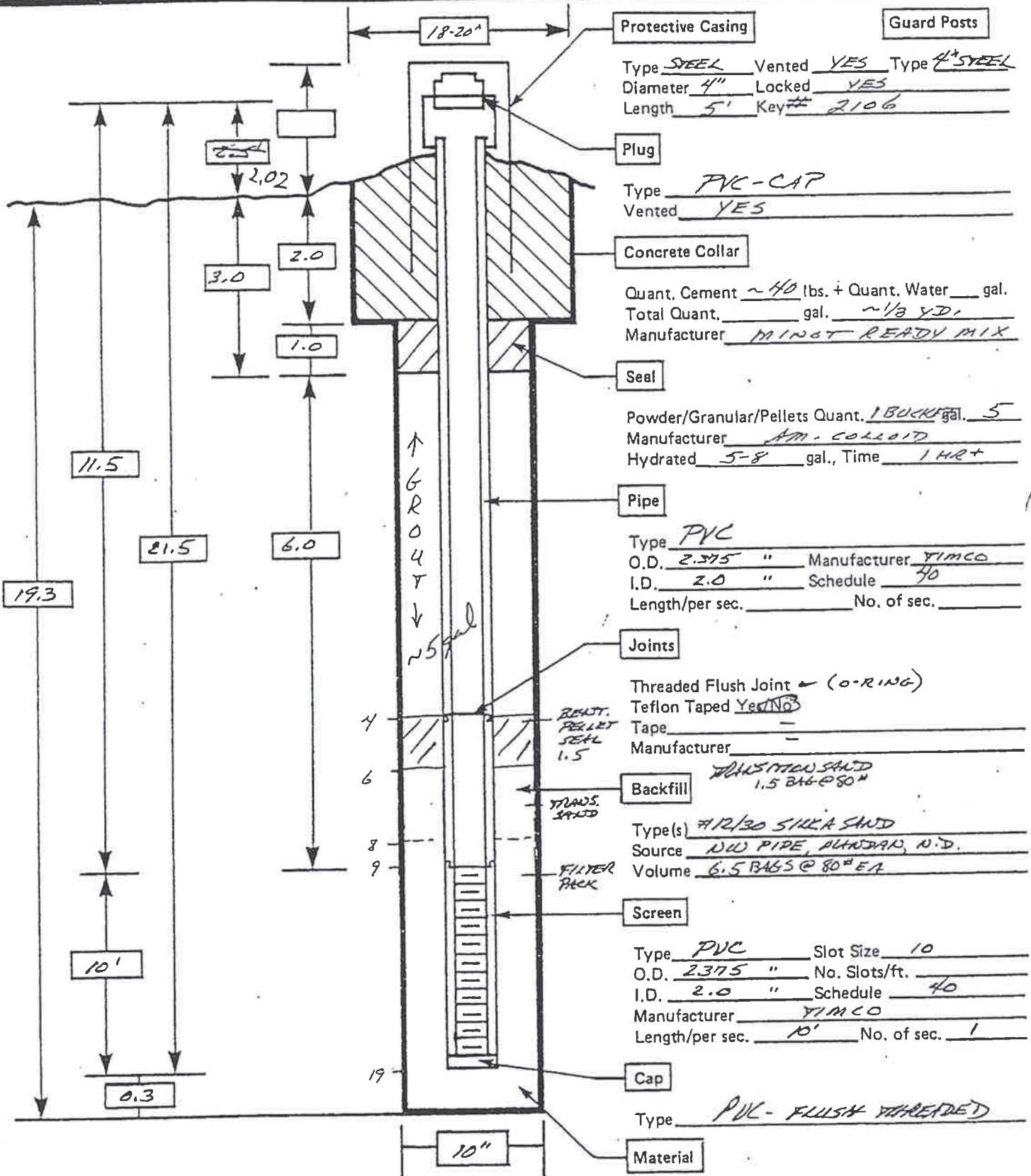
Notes: Water Source MINOT WTR. SYSTEM
DIFFICULT WELL INSTALLATION - PROBABLE STRONG UPWARD GRADIENT
AND COLLAPSING (HEAVE IN HSA) MATERIAL AT SCR. INTERVAL PREVENTED
FILTER PACK / 1 YD. SAND INSTALLATION. NATURAL BACKFILL MATERIAL
... REJECTED OF BEING MED-COURSE SAND.

Donohue

OBSERVATION WELL INSTALLATION DIAGRAM

Well No. 000-104-A

Site: OLD MINDOT LF Date: 5/12/91
 By: BRAUN/S. HETTT Project No. 42427.001



Protective Casing
 Type STEEL Vented YES Type 4" STEEL
 Diameter 4" Locked YES
 Length 5' Key# 2106

Plug
 Type PVC-CAP
 Vented YES

Concrete Collar
 Quant. Cement ~40 lbs. + Quant. Water gal.
 Total Quant. gal. ~1/3 YD.
 Manufacturer MINOT READY MIX

Seal
 Powder/Granular/Pellets Quant. 1 BUCK gal. 5
 Manufacturer AM-COLLOID
 Hydrated 5-8 gal., Time 1 HR+

Pipe
 Type PVC
 O.D. 2.375 " Manufacturer YIMCO
 I.D. 2.0 " Schedule 40
 Length/per sec. No. of sec.

Joints
 Threaded Flush Joint (O-RING)
 Teflon Taped YES/NO
 Tape
 Manufacturer

Backfill
 Type(s) #12/30 SILICA SAND
 Source NW PIPE, ALHAMBRA, N.D.
 Volume 6.5 BAGS @ 80# EA

Screen
 Type PVC Slot Size 10
 O.D. 2.375 " No. Slots/ft.
 I.D. 2.0 " Schedule 40
 Manufacturer YIMCO
 Length/per sec. 10' No. of sec. 1

Cap
 Type PVC - FLUSH THREADED

Material

Notes: Water Source MINOT WTR. SYSTEM

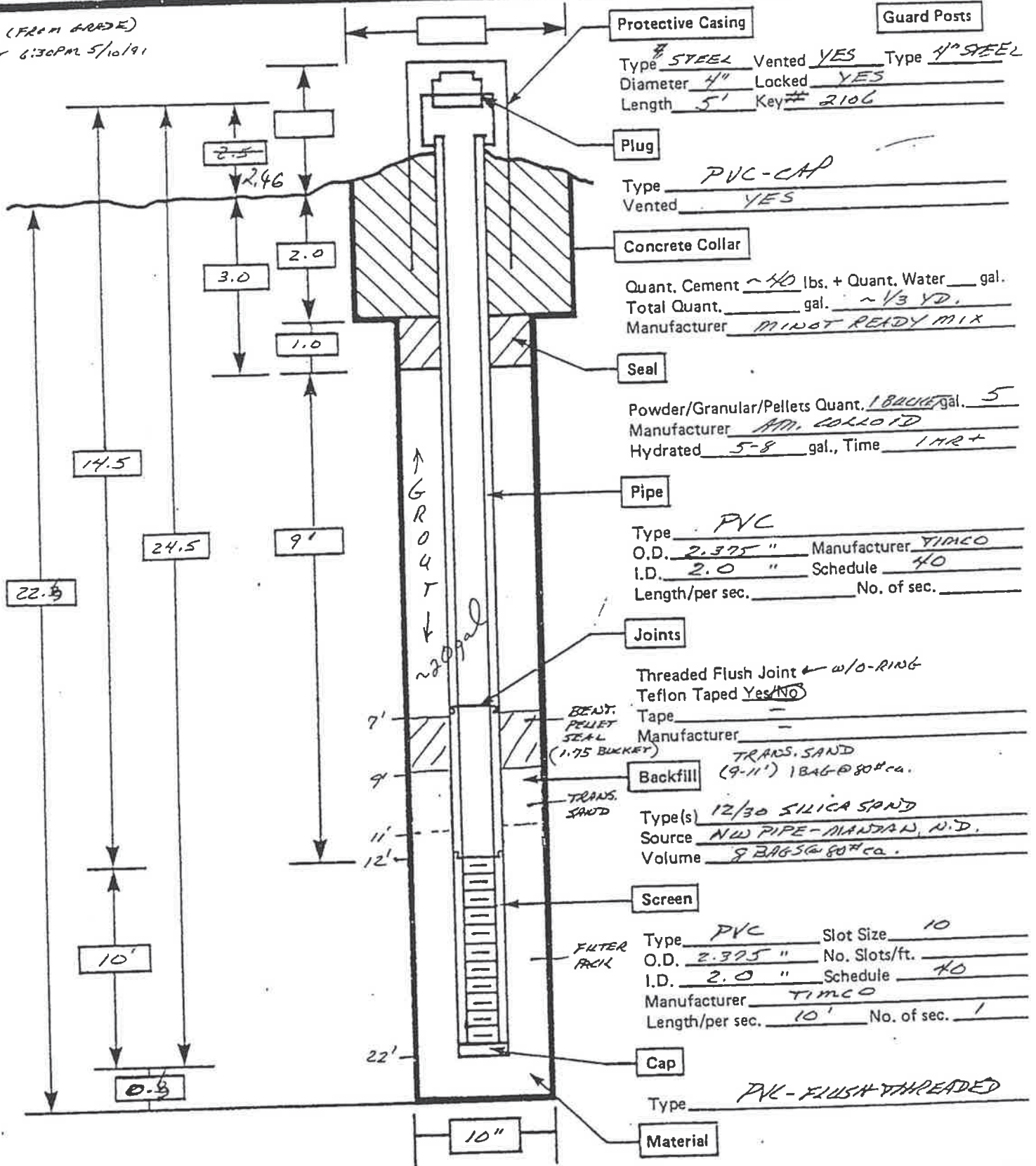
Donohue

OBSERVATION WELL INSTALLATION DIAGRAM

Well No. OW-105-H

Site: RED MOUNT LF Date: 5/10/91
 By: BRAIN/S. PETTIT Project No. 42427.001

L. (FROM GRADE)
 1 FT 6:30 PM 5/10/91



- Protective Casing**
 Type STEEL Vented YES Type 4" STEEL
 Diameter 4" Locked YES
 Length 5' Key# 2106
- Guard Posts**
- Plug**
 Type PVC-CAP
 Vented YES
- Concrete Collar**
 Quant. Cement ~40 lbs. + Quant. Water gal.
 Total Quant. gal. ~1/3 YD.
 Manufacturer MINOT READY MIX
- Seal**
 Powder/Granular/Pellets Quant. 1 BUCKET gal. 5
 Manufacturer AM. COLLOID
 Hydrated 5-8 gal., Time 1 HR+
- Pipe**
 Type PVC
 O.D. 2.375" Manufacturer TIMCO
 I.D. 2.0" Schedule 40
 Length/per sec. No. of sec.
- Joints**
 Threaded Flush Joint w/o-RING
 Teflon Taped Yes/NO
 Tape
 Manufacturer
- Backfill**
 Type(s) TRANS. SAND
 Source (9-11') 1 BAG @ 80# ca.
 Volume 9 BAGS @ 80# ca.
- Screen**
 Type PVC Slot Size 10
 O.D. 2.375" No. Slots/ft.
 I.D. 2.0" Schedule 40
 Manufacturer TIMCO
 Length/per sec. 10' No. of sec. 1
- Cap**
 Type PVC-FLUSH-THREADED
- Material**
 10"

Notes: Water Source MINOT WTR. SYSTEM

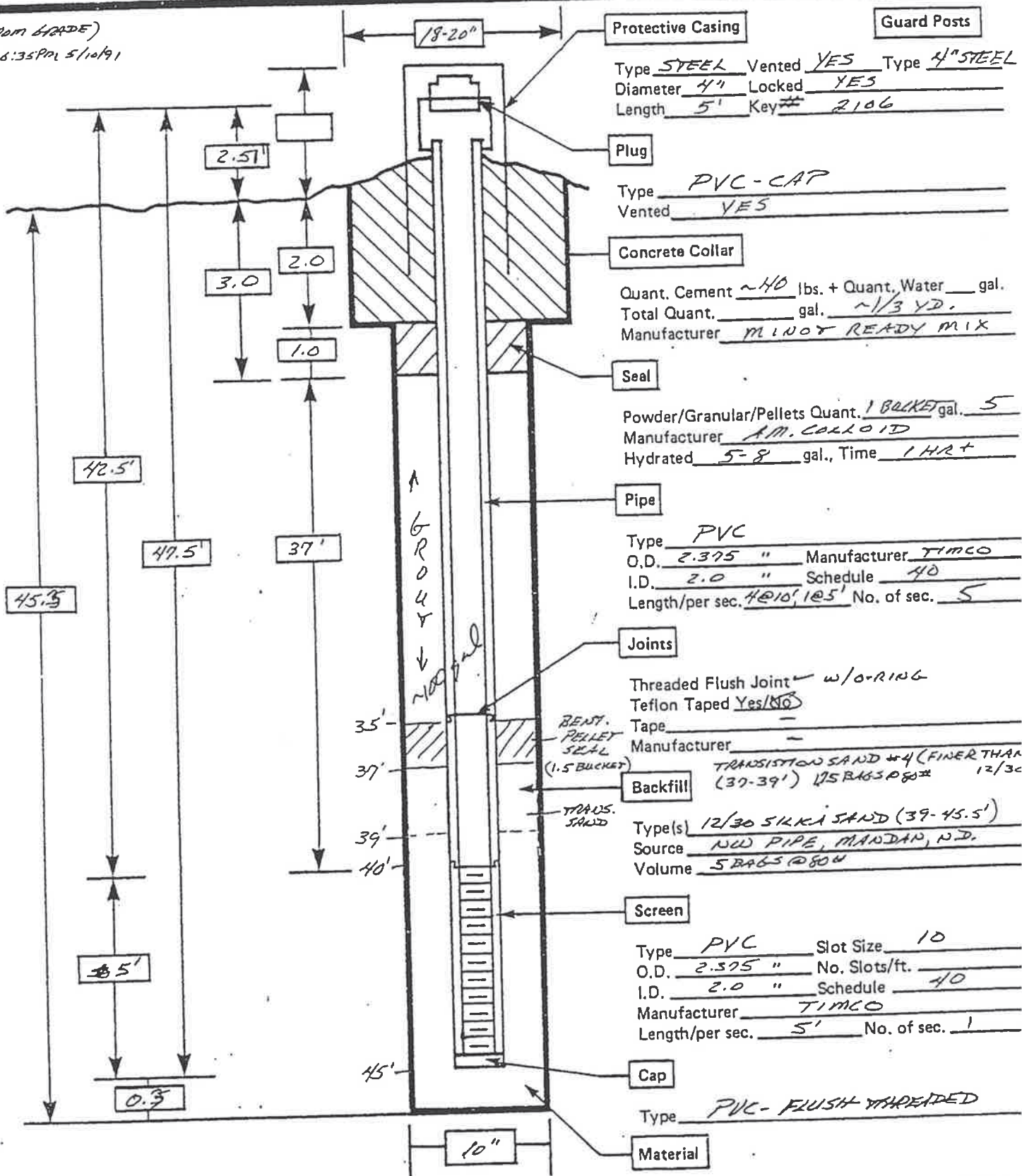
Donohue

OBSERVATION WELL INSTALLATION DIAGRAM

Well No. 1-105-15

Site: OLD MINOT LF Date: 5/10/91
 By: BRAIN/S. PETTIT Project No. 42427.001

(FROM GRADE)
 BY 6:35 P.M. 5/10/91



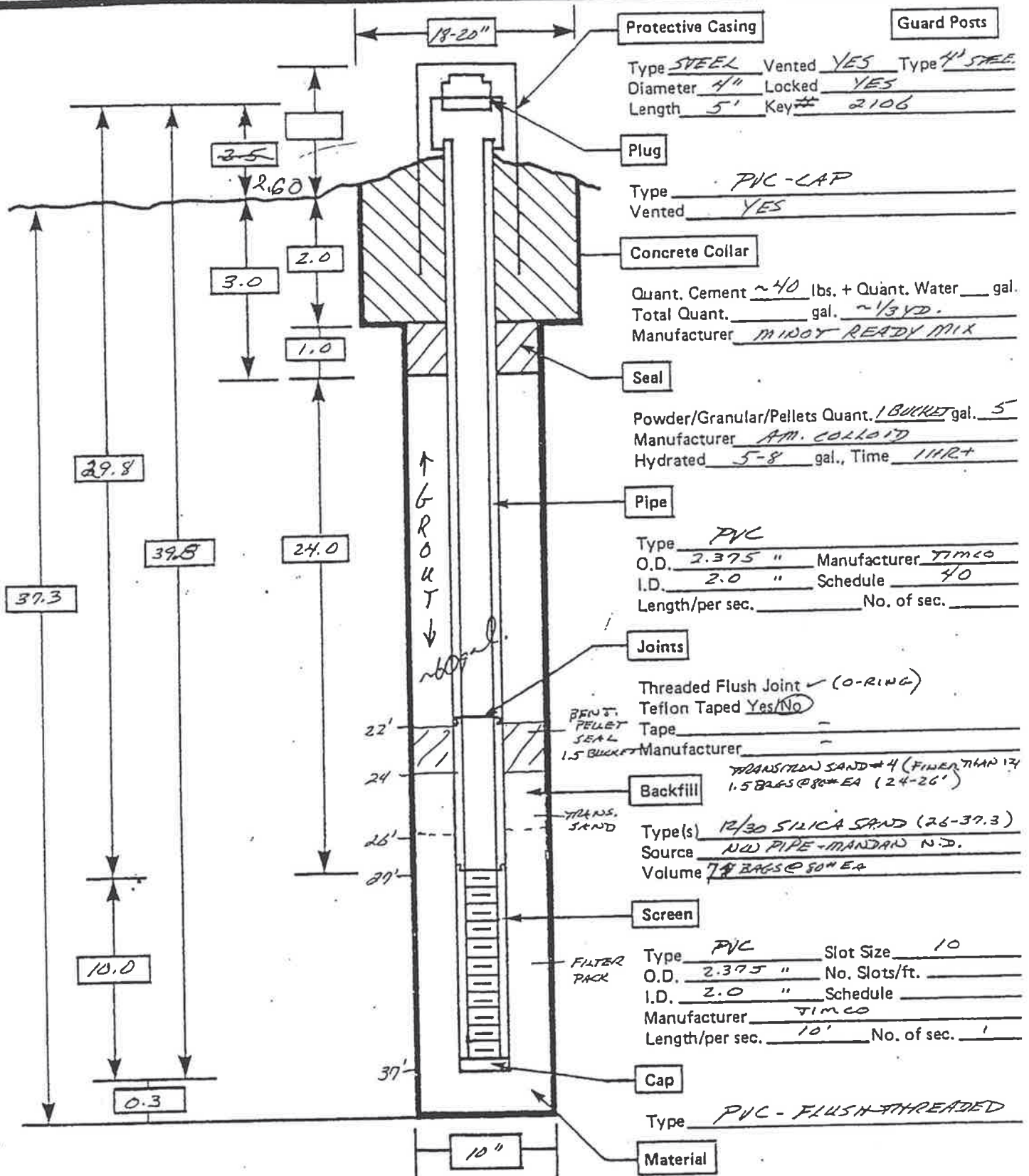
Notes: Water Source MINOT WTR. SYSTEM

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OBSERVATION WELL INSTALLATION DIAGRAM

Well No. OW-107-A

Site: OLD POND LF Date: 5/11/91
 By: BONNIE S. PETTIT Project No. 42427.001



Protective Casing **Guard Posts**
 Type STEEL Vented YES Type 4" STEEL
 Diameter 4" Locked YES
 Length 5' Key# 2106

Plug
 Type PVC-CAP
 Vented YES

Concrete Collar
 Quant. Cement ~40 lbs. + Quant. Water gal.
 Total Quant. gal. ~1/3 YD.
 Manufacturer MIDOT READY MIX

Seal
 Powder/Granular/Pellets Quant. 1 BUCKET gal. 5
 Manufacturer AM. COLLOID
 Hydrated 5-8 gal., Time 1HR+

Pipe
 Type PVC
 O.D. 2.375" Manufacturer TIMCO
 I.D. 2.0" Schedule 40
 Length/per sec. No. of sec.

Joints
 Threaded Flush Joint (O-RING)
 Teflon Taped Yes/No
 Tape
 Manufacturer

Backfill
 Type(s) 12/30 SILICA SAND (26-37.3)
 Source NEW PIPE-MANDAN N.D.
 Volume 78 BAGS @ 50# EA

Screen
 Type PVC Slot Size 10
 O.D. 2.375" No. Slots/ft.
 I.D. 2.0" Schedule
 Manufacturer TIMCO
 Length/per sec. 10' No. of sec. 1

Cap
 Type PVC - FLUSH-THREADED

Material

Notes: Water Source MIDOT WTR. SYSTEM

Appendix C
Modified Statement of Work

I. INTRODUCTION

A. The Consent Decree between the United States of America, State of North Dakota, and the City of Minot, approved by the United States District Court for the District of North Dakota in Civil Action No. A4-95-141A, included an attached Appendix B, identified as a Statement of Work. As noted therein, the purpose of the Statement of Work was “to establish general requirements for implementing Remedial Design/Remedial Action at the Old Minot Landfill Superfund Site (Site).”

B. The Second Modification to Consent Decree modifies the Consent Decree to permit the City to re-purpose the Site for the following recreational uses: an 18-hole disc golf course, mountain-biking trails, and cross-country running trails. Certain provisions of the Statement of Work that was attached to the Consent Decree as Appendix B likewise need to be modified to permit such re-uses.

C. Accordingly, this Modified Statement of Work replaces only those provisions of the Statement of Work expressly referenced below and all other provisions of the Statement of Work remain in full force and effect.

II. MODIFICATIONS: UPDATED REFERENCES

A. The North Dakota Department of Environmental Quality (“NDDEQ”) came into existence on April 29, 2019, and became the North Dakota agency responsible for the administration and enforcement of the environmental protection programs, laws, and rules previously administered and enforced by the North Dakota Department of Health’s Environmental Health Section. Pursuant to 2017 N.D. Sess. Laws ch. 199, § 1, the North Dakota Department of Health’s interest in this matter was assigned to the NDDEQ. Accordingly, all references to the North Dakota State Department of Health (HEALTH) in the Statement of Work are revised to reflect the North Dakota Department of Environmental Quality (NDDEQ).

B. All references to the O&M Manual in the Statement of Work shall refer to the Operations and Maintenance Plan, approved on May 7, 2025, and attached to the Second Modification to Consent Decree as Appendix B.

III. MODIFICATION TO SECTION 3.11 OF THE STATEMENT OF WORK

A. *Section 3.11 of the Statement of Work shall be amended by replacing the existing provision 3.11 with the following:*

3.11 Institutional Controls Plan.

CITY shall prepare a plan to implement, administer, and maintain any Institutional Controls except for those Institutional Controls that governmental entities (other than CITY) and/or quasi-governmental entities have the sole authority to implement, administer, and maintain. This plan will be reviewed by EPA and NDDEQ and approved by EPA in accordance with the Second Modification.

At a minimum, the City shall continue to ensure its Institutional Controls implemented as part of the Consent Decree and its Statement of Work continue to restrict uses of ground water immediately adjacent to the landfill such that the effectiveness of the remedy identified in the ROD will not be compromised. The City shall also revise City Ordinance No. 3406, which was enacted as the Institutional Controls Plan under the Consent Decree and its Statement of Work, to account for the repurposed Site and protect public health, welfare, and the environment through the maintenance of the City's previous response action at the Site.