pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

RESIDUAL WASTE LANDFILL ANNUAL OPERATION REPORT NON-CAPTIVE FACILITY Instructions

1. This report is due on or before June 30 each year covering the period January 1 to December 31 of the preceding year.

2. Send one (1) copy of the report and the check for the administrative fee made payable to the "Commonwealth of Pennsylvania" to the attention of the Solid Waste Manager in the Regional Office listed below.

3. Send one (1) copy of the completed report to:

   Bureau of Waste Management
   Director's Office and Program Development
   P.O. Box 69170
   Harrisburg, PA 17106-9170

4. Send one (1) copy of Page 5 "Summary of Detected Radioactive Materials" to:

   Bureau of Radiation Protection
   P.O. Box 8469
   Harrisburg, PA 17105-8469

5. The report forms may be reproduced without modification of content.

REGIONAL OFFICES
(and counties served)

DEP Southeast Region.
2 East Main Street
Norristown, PA 19401
Phone: (484) 250-5900
Bucks - Chester - Delaware - Montgomery - Philadelphia

DEP Northcentral Region
208 West Third Street, Suite 101
Williamsport, PA 17701-6448
Phone: (570) 327-3653
Bradford - Cameron - Centre - Clearfield - Clinton - Columbia - Lycoming - Montour - Northumberland - Potter - Snyder - Sullivan - Tioga - Union

DEP Northeast Region
2 Public Square
Wilkes-Barre, PA 18701-1915
Phone: (570) 826-2516
Carbon - Lackawanna - Lehigh - Luzerne - Monroe - Northampton - Pike - Schuylkill - Susquehanna - Wayne - Wyoming

DEP Southwest Region
400 Waterfront Drive
Pittsburgh, PA 15222-4745
Phone: (412) 442-4000
Allegheny - Armstrong - Beaver - Cambria - Fayette - Greene - Indiana - Somerset - Washington - Westmoreland

DEP Southcentral Region
909 Elmerton Avenue
Harrisburg, PA 17110-8200
Phone: (717) 705-4706
Adams - Bedford - Berks - Blair - Cumberland - Dauphin - Franklin - Fulton - Huntingdon - Juniata - Lancaster - Lebanon - Mifflin - Perry - York

DEP Northwest Region
230 Chestnut Street
Meadville, PA 16335-3481
Phone: (814) 332-6848
Butler - Clarion - Crawford - Elk - Erie - Forest - Jefferson - Lawrence - McKean - Mercer - Venango - Warren

2500-FM-BWM0407 1/2015
25 Pa. Code §288.283
Form

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Date Prepared	Permit Number
April 15, 2024	301071

RESIDUAL WASTE LANDFILL
ANNUAL OPERATION REPORT
NON-CAPTIVE FACILITY – GENERATOR INFORMATION

Name of Permittee: MAX Environmental Technologies, Inc

Facility Name: Yukon Facility

City: Yukon State: PA Zip: 15698 Phone No.: (724) 722-3500

TAX I.D.: 25-10611423 or SS# - -

INSTRUCTIONS: Enter the Name, Mailing Address, County (PA County) and State of each Generator under the column titled Generator Information. Enter the 3 digit Code number (from the Waste Code Appendix) for each waste type received. Enter the total Weight to the nearest 1 /1 0 ton, of each waste type received in the spaces in the column titled Total. Enter the State abbreviation from Table 2, and the PA County Code from Table 1. Enter the generator information only once for each generator. Leave the Generator Information Section blank for additional waste codes from the same generator.

Generator Information (Type or Print)	Waste Code (From appendix)	Total Tons (To nearest 1/10 ton)
Company: Dakota Oil & Gas Company **Street Address:** 1599 Hartman Road Marion Center (City) PA (State) 32 (PA County Code) (PA Only)	R 811	155 • 25
Company: Kaiser Aluminum **Street Address:** 600 Kaiser Drive Heath (City) OH (State) (PA County Code) (PA Only)	R 103	58 • 28
Company: McConway & Torley LLC **Street Address:** 109 48th Street Pittsburgh (City) PA (State) 02 (PA County Code) (PA Only)	R 101	87 • 87
Company: Pureon Inc **Street Address:** 1101 Mountain View Drive Smithfield (City) PA (State) 26 (PA County Code) (PA Only)	R 204	232 • 34
Company: Penneco Oil Company **Street Address:** 6608 Route 22 Delmont (City) PA (State) 65 (PA County Code) (PA Only)	R 811	292 • 71
Company: Revolution VSC Acquistion GP, Inc **Street Address:** 133 Tonolli Road Mississauga (City) ON (State) (PA County Code) (PA Only)	R 102	1568 • 30
TOTAL FOR THIS SHEET		2394 • 75

2500-FM-BWM0407 1/2015
25 Pa. Code §288.283
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Date Prepared	Permit Number
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RESIDUAL WASTE LANDFILL
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NON-CAPTIVE FACILITY – GENERATOR INFORMATION

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Facility Name: Yukon Facility

City: Yukon State: PA Zip: 15698 Phone No.: (724) 722-3500

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Generator Information (Type or Print)	Waste Code (From appendix)	Total Tons (To nearest 1/10 ton)
Company: Rockwool **Street Address:** 665 Northport Avenue Kearneysville (City) WV (State) (PA Only) County Code	R 003	60 • 96
Company: Port Authority of Allegheny County **Street Address:** 611 West Warrington Avenue Pittsburgh (City) PA (State) 02 (PA Only) County Code	R 109	66 • 49
Company: Professional Res. Development (Frye Farm) **Street Address:** 1200 Network Center Drive Effingham (City) IL (State) (PA Only) County Code	R 508	10 • 09
Company: Ecobat Resources **Street Address:** 65 Ballard Road Middletown (City) NY (State) (PA Only) County Code	R 102	6515 • 96
Company: Ecobat Resources **Street Address:** 65 Ballard Road Middletown (City) NY (State) (PA Only) County Code	R 506	255 • 80
Company: Ecobat Resources **Street Address:** 65 Ballard Road Middletown (City) NY (State) (PA Only) County Code	R 413	8 • 18
TOTAL FOR THIS SHEET		6917 • 48

2500-FM-BWM0407 1/2015
25 Pa. Code §288.283
Form

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
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Date Prepared	Permit Number
April 15, 2024	301071

RESIDUAL WASTE LANDFILL
ANNUAL OPERATION REPORT
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Name of Permittee: MAX Environmental Technologies, Inc

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Generator Information (Type or Print)	Waste Code (From appendix)	Total Tons (To nearest 1/10 ton)
Company: Timkensteel **Street Address:** 1835 Dueber Avenue SW Canton (City) OH (State) (PA Only) (County Code)	R 106	85 • 19
Company: Patriot Exloration Corp **Street Address:** 1384 State Route 711 Stahlstown (City) PA (State) 65 (PA Only) (County Code)	R 811	1 • 20
Company: **Street Address:** (City) (State) (PA Only) (County Code)	R	•
Company: **Street Address:** (City) (State) (PA Only) (County Code)	R	•
Company: **Street Address:** (City) (State) (PA Only) (County Code)	R	•
Company: **Street Address:** (City) (State) (PA Only) (County Code)	R	•
TOTAL FOR THIS SHEET		86 • 39

Date Prepared	**For the report year 2023** (enter year) **(January 1 to December 31)**	Permit Number
April 15, 2024		301071

A. FACILITY INFORMATION

Landfill Capacity:

1. Total Permitted capacity 430,000 cy tons.
2. Capacity used in this report period 29,013 cy tons.
3. Capacity used in previous reporting periods 400,987 cy tons.
4. Remaining capacity 33,078 cy tons.
5. Number of operating days this report period 365 days.
6. Estimated remaining life of facility 1.84 months.

B. PERMIT AND OPERATION STATUS

1. Change of Ownership - Identification of Interests - Compliance Information.

   ☐ NO. If "NO," complete a copy of Form C1 "Compliance History Certification" (2540-PM-BWM0351) and attach it to this report.

   ☒ YES. If "YES," complete a copy of Form HW-C, "Compliance History" (2540-FM-BWM0058) and attach it to this report.

2. Right of Entry - Lease Agreement - Land Ownership.

   ☒ NO.

   ☐ YES. If "YES", submit a revised copy of Form E, "Contractual Consent of Landowner" (2540-PM-BWM0353). Changes involving land ownership may require the submittal of Part B4 and B5 of Form HW-C concerning surface or subsurface land ownership.

3. Radioactive Monitoring

   Attach a summary of detected radioactive materials using the attached format.

   (Note to Operator: Forward a copy of the above attachment to the Bureau of Radiation Protection, P.O. Box 8469, Harrisburg, PA 17105-8469)

C. FINANCIAL ASSURANCE AND BONDING.

1. Attach a written update of the total bond liability for the facility in accordance with Section 287.331 - bond amount determination and 287.332 - bond amount adjustments. If additional bond is determined to be necessary, it shall be submitted to the Department within 90 days after the annual report is due.

2. Attach documentation for the type of financial assurance employed as required by 25 Pa. Code Sections 287.311 - 287.375.

   ☒ Additional bond is not required. Attach a copy of completed bonding worksheets.

   ☐ Additional bond will be submitted. Attach a copy of completed bonding worksheets.

MAX Environmental Yukon Facility 2023 Annual Operations Report

Addendum

In 2023, the Yukon facility we placed 29,013 cy of waste into Landfill 6. Assuming we replicate that volume in 2024 and with 33,078 cy of airspace remaining, we estimate that we have: 33,078/29,013 = 1.137 years. 1.137 x 12 = 13.65 months of airspace which takes us into February 2025.

However, through the first six months of 2024, we have only accepted approximately 7000 tons of waste into the Yukon facility and some of that waste was disposed of off-site (after treatment). If we accept 7000 additional tons for the rest of 2024, we estimate that we will have 33,078/14,000 = 2.36 years or 28 months of airspace which would take us into 2026.

The AOR remaining airspace calculation of 1.84 months is based on us accepting our permitted average daily volume of 600 tons, which we have not met in several years.

Date Prepared	For the report year 2023 (enter year) (January 1 to December 31)	Permit Number
April 15, 2024		301071

D. TOPOGRAPHIC MAP UPDATE

Attach a topographic map of the same scale, contour interval and grid system as the original site plans showing:

1. Contours at the beginning and the end of the year.
2. Areas that have closed and are in post closure care.

Certification of Registered Professional Engineer

This is to certify that the topographic map update accurately represents the status of the facility and does not, to the best of my knowledge, withhold information that is pertinent to a determination of compliance with the requirements of the Department. I am aware that there are significant penalties for submitting false information.

Name RICHARD ZOLLINGER
(Please Print)

Signature

Date 5/13/2024

Address 1408 CORAOPOLIS HGTS Rd
MOON TWP, PA 15108

Telephone 412-264-7726

Seal of Pennsylvania Registered Professional Engineer

COMMONWEALTH OF PENNSYLVANIA
REGISTERED
RICHARD W. ZOLLINGER
ENGINEER
No. 24176-E

E. MONITORING PLAN EVALUATION

☐ Develop and attach a narrative evaluating whether the monitoring plan implemented under this subchapter needs to be revised to comply with Section 288.252 (relating to number, location and depth of monitoring points) because of changes in groundwater elevation or other reasons. If this evaluation determines that changes in the approved groundwater monitoring plan are necessary, the operator shall immediately notify the Department and submit an application for permit modification under Section 287.222 (relating to permit modification) for necessary changes in the monitoring plan.

☐ Revisions are required. Report is attached.

☒ Revisions are not required. Report is attached.

F. CONSTRUCTION AND OPERATION NOTIFICATION/CERTIFICATION

☒ Develop and attach a narrative description explaining any critical stages of facility construction or operation that require certification by a professional engineer which will occur in the next year.

G. WASTE ANALYSIS

Certification that the operator has received the analysis or certification required by §287.54 (chemical analysis of waste) for each type of waste received at the facility.

☐ All required analyses were submittal suring the year.

Date Prepared	Permit Number
April 15, 2024	301071

H. PERMIT ADMINISTRATION FEE

Please submit a check payable to the "Commonwealth of Pennsylvania." Attach the check to one of the copies being sent to the Regional Office,

☒ $4,600 - all residual waste landfills.

IDENTIFY ALL ATTACHMENTS BY PERMIT NUMBER AND DATE PREPARED.

Officer Certification

This is to certify that I have personally examined this report and am familiar with the information submitted in it and all attached documents. I am aware of the Department of Environmental Protection's requirements for this report and this facility. To the best of my knowledge, information and belief, the information submitted is true, accurate, and complete. I am aware that there are significant penalties for submitting false information.

Name of Officer JARED STANGO (Please Print) Date 5-28-24

Signature _____ Telephone 724-272-7925

Title CFO

2500-FM-BWM0407 1/2015
25 Pa. Code §288.283
Form

Date Prepared
April 15, 2024

SUMMARY OF DETECTED RADIOACTIVE MATERIALS

Permit Number
301071

Date	Isotope Detected (e.g. I-131, Ra-226, etc.)	Maximum Dose Rate On Truck* (microR/hr)	Maximum Dose Rate On Item** if measured (microR/hr)	Description of Waste (tenorm, medical, norm, etc.)	Disposition (Disposed on-site rejected-DOT exemption number, etc.)
2/3/2023	Ra-226	19	19	tenorm	Disposed on-site
4/8/2023	Ra-226	12	12	tenorm	Disposed on-site
11/21/2023	UNK	17	17	tenorm	Disposed on-site

* Surface (2") dose rate on truck
** One foot dose rate on item

Note: Use additional sheets as necessary.
Number of pages included: ______________________

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

FORM MRW-C
IDENTIFICATION OF INTERESTS & COMPLIANCE HISTORY

Fully and accurately provide the following information, as specified. Attach additional sheets as necessary.

Type of MRW-C Submittal (check all that apply):

☐ **Original Filing** ☒ **Amended Filing** **Date of Last Filing** **June 2023**

Type of Permit or License Submittal:

☒ **New Application** ☐ **Renewal** ☐ **Annual Update** ☐ **Other** _____
(specify)

A. General Applicant Information:

1. Name of the APPLICANT:

MAX Environmental Technologies, Inc.

☐ If operating under a fictitious name, please state name here: _____

ADDRESS: 5700 Corporate Drive
Suite 425
Pittsburgh, PA 15237

TELEPHONE NUMBER: 412-343-4900

EIN or other TAX ID No.: 25-1061423

PERMIT or LICENSE ID: 301071 (RW Yukon), PAD004835146 (HW Yukon), 301359 (RW Bulger), PAD0590807072 (HW Bulger)

2. Identify the form of management under which the applicant conducts its business (check appropriate box):

☐ Individual
☐ Municipality
☐ Proprietorship
☐ Public Corporation
☒ Private Corporation
☐ Syndicate
☐ Municipal Authority
☐ Limited Liability Company
☐ Partnership
☐ Limited Partnership
☐ Government Agency
☐ Joint Venture
☐ Other _____ (specify)

3. Type of permit or license application (check all that apply):

☐ Municipal Waste Permit
☐ Regulated Medical and Chemotherapeutic Waste Transporter License
☒ Residual Waste Permit
☐ Act 90 Waste Transportation Safety Authorization
☐ Other _____ (specify)

B. Information Related to the Applicant

1. Provide the names, addresses and telephone numbers of any contractor, including the contractor for gas or energy recovery from the proposed operation, if the contractor is a person other than the applicant.

2. Provide the names, addresses, telephone numbers and Tax ID No. or EIN of related parties to the applicant and a description of the relationship to the applicant. (see instructions for definition of related party.)

3. Provide the names and addresses of all owners of record of surface and subsurface areas within, and contiguous to, the proposed permit area. (Not applicable to Act 90 waste transportation safety authorization.)

4. Provide the names and addresses of all holders of record to a leasehold interest of surface and subsurface areas within and contiguous to the proposed permit area. (Not applicable to Act 90 waste transportation safety authorization.)

C. General Corporate Information

For applicants other than sole proprietorships, provide the following information:

1. Provide the names, titles and addresses of all principals, corporate officers, general and limited partners, directors and other persons performing a function similar to a director.

2. The principal shareholders or stockholders who own, hold or control stock of 5% or more of a publicly held corporation or 10% or more of a privately held corporation.

3. The names, principal places of business and Tax ID No or EINs of United States parent corporations of the applicant, including the ultimate parent corporations and United States subsidiary corporations of the applicant and the applicant's parent corporations. A diagram of corporate structure may be provided to illustrate corporate relationships.

4. Provide the name and address or name and Tax ID No or EIN of other persons having or exercising control over any aspect of the proposed facility, including but not limited to, associates, agents, contractors, subcontractors and property owners. The relationship to the applicant must be clearly defined.

D. Beneficial Interests and Management

1. If the applicant, or an officer, principal shareholder, general or limited partner, limited liability company member or manager, or other related party has a beneficial interest in, or otherwise manages or controls another person or municipality engaged in the business of solid waste collection, transportation, storage, processing, treatment or disposal, provide the following information:

   a. The name, address and EIN or other TAX ID No. of the corporation or other person or municipality.

   b. The nature of the relationship or participation with the corporation or other person or municipality.

E. Information Regarding Specific Businesses, Permits and Licenses

For the applicant and related parties, provide the following:

1. List all **permits, licenses or authorizations issued** by the Department under the environmental protection acts that are currently in effect or have been in effect at any time, in the 10 years prior to the date on which this form is signed. This list is to include the type of permit, license or authorization; permit, license or authorization number; location; address; issuance date and expiration date.

2. The location, type of operation and State or Federal permits under which all solid waste processing or disposal facilities in this Commonwealth operate or have operated, in the 10 years prior to the date on which this form is signed. Facilities that are no longer permitted or which were never under a permit shall also be listed.

3. List all **permit, license or authorization denials** by the Department or any other state or federal agency under the environmental protection acts within 10 years prior to the date on which this form is signed. Include the type of permit, license or authorization; permit, license or authorization number; location; denial date and reason for denial.

4. List all persons that have filed for or been discharged from **bankruptcy** in this Commonwealth within 10 years prior to the date on which this form is signed. Specify the circumstances of bankruptcy, including those for which the debtor sought to abandon property or to be discharged from any environmental liability subject to the environmental protection acts. Including the name of the bankruptcy court, docket number and description and location of any property involved.

F. Compliance History:
(Note: Copies of specific documents must be made available to the Department upon its request)

For the applicant and related parties, provide the following:

1. List all **"Enforcement Actions"** issued by the Department in this Commonwealth, or, where applicable, other regulatory agency in another state within 10 years prior to the date on which this form is signed, using the following format grouped by state and location in chronological order.

Type of Action	Date	Location	Permit/ License/ EPA ID #	Issuing Agency	Nature of Violation	Disposition	Dollar Amount of Penalty

Enforcement actions include but are not limited to:

a. All **notices of violation (NOVs)** issued by the Department involving the environmental protection acts, a condition of a permit or license or regulation or order of the Department.

b. All **administrative orders, bond forfeiture actions** and **civil penalty actions** adjudicated by any judicial body involving the environmental protection acts, regulation, order or condition of a permit or license in either the Commonwealth or other state.

c. All **summary, misdemeanor or felony convictions,** or **pleas of guilty or no contest** that have been obtained, pursuant to the environmental protection acts, in either the Commonwealth or other state, or any acts involving the storage, collection, treatment, transportation, processing or disposal of solid waste. For **summary offenses**, only those offenses within the Commonwealth need to be reported.

d. All **court proceedings** involving the environmental protection acts in the Commonwealth or other state.

e. All **consent orders, consent adjudications, consent decrees or monetary settlements (settlement agreements, letter agreements, settlement letters or consent assessments)** between the applicant and related parties; and any state, federal or county agency regarding the environmental protection acts, any other environmental statute, regulations or ordinance, in the Commonwealth or other state.

f. All **civil penalties and any permit or license suspensions/revocations** within the Commonwealth adjudicated by any judicial body involving the environmental protection acts, regulation, order or condition of a permit or license.

2. List all principals, managers, partners and directors that have held similar positions with another entity that has committed any violation of the environmental protection acts. The list shall include the name of the other entity, date, location, nature and disposition of the violation, and shall explain the relationships between the principal shareholder, partner or member and both of the following:

a. The owner or operator

b. The other corporation, partnership or limited liability company

I hereby certify, pursuant to the penalties of 18 Pa. C.S.A §4904, that I have the authority to submit the information contained in this form on behalf of the applicant or permittee named herein and that the information provided in this form is true and correct to the best of my knowledge, information and belief.

(Signature)

Name: Robert F Shawver
(Print or Type Name)

Title: President
(Print or Type Title)

Date: 5-29-24

(Signature)

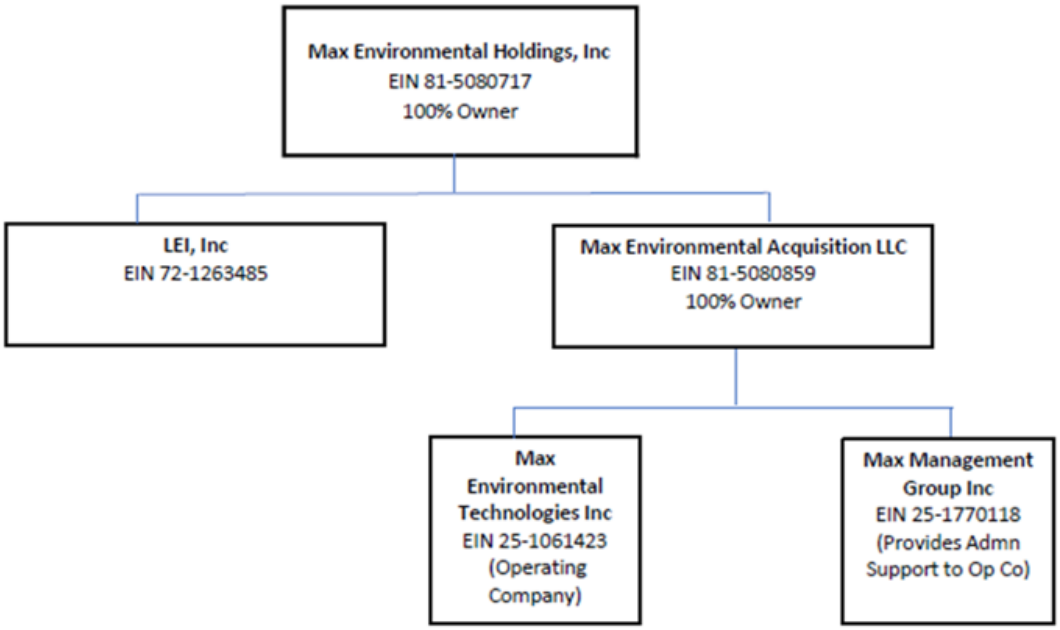
Name: JARED STANG
(Print or Type Name)

Title: SECRETARY AND CFO
(Print or Type Title)

Date: 5-29-24

FORM MRW-C – COMPLIANCE HISTORY

MAX Environmental Holdings, Inc
Ownership Org Chart



The corporate office address of the MAX entities is:
5700 Corporate Drive, Suite 425
Pittsburgh, PA 15237

Other locations:

MAX Yukon Facility	233 MAX Lane, Yukon, PA 15698
MAX Bulger Facility	200 MAX Drive, Bulger, PA 15019
LEI Independence Facility	11441 Fontana Lane, Independence, LA 70443
LEI Hammond Facility	46257 Morris Road, Hammond, LA 70401

Response to Items B.2 and B.3:

MAX Environmental Principals & Officers

Name	Title	Address
Robert Shawver	President and Chief Executive Officer	39375 Winners Way, #57005, Bethany Beach, DE 19930
Ellen Yochus	Treasurer	519 Lincoln Avenue, Heidelberg, PA 15106
Heidi Goldstein	Vice President and Secretary	10 Westport Road, Wilton, CT 06897
Joseph Tegreene	Assistant Secretary	200 Public Square, Suite 2300, Cleveland, OH 44114
Jared Stango	Chief Financial Officer	415 Sunderland Drive, Pittsburgh, PA 15237
Robert Prince	Shareholder, MAX Environmental Holdings	38245 Island Path, Louisville, TN 37777
David Prince	Shareholder, MAX Environmental Holdings	1816 Stardust Lane, Olean, NY 14760
Altus Capital	Shareholder, MAX Environmental Holdings	10 Westport Road, Wilton, CT 06897

No individual holds a controlling interest in MAX. Altus Capital Partners II, LP, a private equity firm based in Wilton, CT, owns 90% of MAX.

Response to Item B.4:

Bulger Facility

Owners within permit area:

MAX Environmental Technologies, Inc.
5700 Corporate Drive, Suite 425
Pittsburgh, PA 15237

Owners of record of subsurface area within area:

Undetermined. Certain mineral rights were reserved by the grantees in prior transactions in the chain of title involving the property prior to its acquisition by MAX Environmental Technologies, Inc. and its predecessor. MAX Environmental Technologies, Inc. is currently attempting to identify the successors in interest to such reserved mineral rights.

Owners of record of surface area contiguous to the facility:

Joyce A. & Raymond J. Zalaznik, Jr.
77 Bulger Block Road
Bulger, PA 15019
Smith Township
Parcel Number: 570-006-00-00-0032-00

Roger L. & Traci L. Kokoskie
56 Bulger Block Road
Bulger, PA 15019
Smith Township
Parcel Number: 570-006-00-00-0037-00

Washington County (Panhandle Trail)
100 W. Beau Street Suite 702
Washington, PA 15301
Smith Township
Parcel Number: 550-016-00-00-0007-00
Parcel Number: 570-020-00-00-0008-00

Cataney Fam LTD Part
283 Cataney Lane
Bulger, PA 15019
Robinson Township
Parcel Number: 550-016-00-00-0010-00

Adele Corp
520 Shaffer Road
Bulger, PA 15019
Robinson Township
Parcel Number: 550-016-00-00-0006-00
Parcel Number: 550-016-00-00-0006-06

Patrick J. Carroll
512 Shaffer Road
Bulger, PA 15019
Smith Township
Parcel Number: 550-016-00-00-0006-05
Parcel Number: 550-016-00-00-0006-07
Parcel Number: 570-007-00-00-0010-00

Neal R. & Linda Matchett
700 Candor Road
Bulger, PA 15019
Smith Township
Parcel Number: 570-007-00-00-0004-00

Mark & Laurie Crawford
651 Candor Road
Bulger, PA 15019
Robinson Township
Parcel Number: 550-013-00-00-0004-01

Michael G. & Jo Ann P. Duran
601 Candor Road
Bulger, PA 15019
Robinson Township
Parcel Number: 550-013-00-00-0004-00

John G. Shoup
205 Bulger Candor Road
Bulger, PA 15019
Smith Township
Parcel Number: 570-007-00-00-0002-00

Amy J Schuler Shaw
183 Bulger Candor Road
Bulger, PA 15019
Smith Township
Parcel Number: 570-005-00-00-0012-05

Raymond A. Scruppi
167 Bulger Candor Road
Bulger, PA 15019
Smith Township
Parcel Number: 570-006-00-00-0032-06

Rose Marie Shaffer
96 Milton Ct.
Inwood, WV 25428
Robinson Township
Parcel Number: 550-016-00-00-0002-00
Parcel Number: 550-016-00-00-0004-00
Parcel Number: 550-016-00-00-0005-00

Steve & Jean Shaffer
710 Shaffer Road
PO Box 168B
Bulger, PA 15019
Robinson Township
Parcel Number: 550-016-00-00-0003-00

William C. & Juanita Tague
5659 Sixth Street
Baldwin, PA 15236
Robinson Township
Parcel Number: 550-013-00-00-0017-00

Amber & Harold A. Dudenhoeffer
14367 S. Mosiertown Road
Meadville, PA 16335
Robinson Township
Parcel Number: 550-013-00-00-0018-00

Yukon Facility

Owners within permit area:

MAX Environmental Technologies, Inc.
5700 Corporate Drive, Suite 425
Pittsburgh, PA 15237

Owners of record of subsurface area within area:

After further investigation and consultation with title experts all mineral rights are owned by MAX, have reverted to MAX or MAX has exercised its right to acquire such rights. Also, MAX has acquired ownership of the oil and gas rights for the facility.

Owners of record of surface area contiguous to the facility:

MAX Environmental Technologies, Inc.
5700 Corporate Drive, Suite 425
Pittsburgh, PA 15237
Parcel ID: 59-03-00-0-016
Parcel ID: 59-04-00-0-002
Parcel ID: 59-04-00-0-004
Parcel ID: 59-06-00-0-098

Angeline Babich
PO Box 97
Yukon, PA 15698
South Huntingdon Township
Parcel ID: 58-15-00-0-094
Parcel ID: 58-16-00-0-007
Parcel ID: 59-03-00-0-015
Parcel ID: 59-04-00-0-001
Parcel ID: 59-04-00-0-006

Joan & Pauline Zorosak
4293 Greensburg Pike, Apt. 1406
Pittsburgh, PA 15221
South Huntingdon Township
Parcel ID: 59-04-00-0-005

Fred & Carole Hood
335 Spring Street
Yukon, PA 15698
South Huntingdon Township
Parcel ID: 59-07-00-0-003

Cynthia Kelley
329 Spring Street
Yukon, PA 15698
South Huntingdon Township
Parcel ID: 59-07-00-0-002

Craig A. Zafaras
326 Spring Street
Yukon, PA 15698
South Huntingdon Township
Parcel ID: 59-07-00-0-006

Matthew Sever Jr
316 Spring Street
Yukon, PA 15698
South Huntingdon Township
Parcel ID: 59-07-00-0-136

Charles & Kathleen Hoadwonic
306 Spring Street
Yukon, PA 15698
South Huntingdon Township
Parcel ID: 59-07-00-0-142

Patrick & Darla M. Reinstadtler
274 Spring Street
Yukon, PA 15698
South Huntingdon Township
Parcel ID: 59-07-00-0-138

James W. & Diane R. Knepper
266 Spring Street
Yukon, PA 15698
South Huntingdon Township
Parcel ID: 59-07-00-0-139

Michelle & Kevin Batchko
258 Spring Street
Yukon, PA 15698
South Huntingdon Township
Parcel ID: 59-07-00-0-140

Sampson & Virginia Harris
238 Spring Street
Yukon, PA 15698
South Huntingdon Township
Parcel ID: 59-07-00-0-141

John T. & Marsha Tomay
208 Spring Street
Yukon, PA 15698
South Huntingdon Township
Parcel ID: 59-07-00-0-001

Helen Ianni etal
41 Lobos Street
San Francisco, CA 94112
South Huntingdon Township
Parcel ID: 59-06-00-0-099

Carol A. & Charles E. Bobich
551 Turkeytown Road
West Newton, PA 15089
South Huntingdon Township
Parcel ID: 59-06-00-0-096

Park D. Dix
198 Spring Street
Yukon, PA 15698
South Huntingdon Township
Parcel ID: 59-06-00-0-214

George W. & Holly A Knepper
290 Spring Street
Yukon, PA 15698
South Huntingdon Township
Parcel ID: 59-07-00-0-137

Robert G. & Maryln V. Smouse
439 Bells Mills Road
West Newton, PA 15089
South Huntingdon Township
Parcel ID: 59-03-00-0-040

Owners of record of subsurface area contiguous to the facility:

Lorasen Holdings, Inc.
Whyel Coke Company Heirs
Joan & Pauline Zorosak
MAX Environmental Technologies, Inc.

Response to Item B.5:

Holders of record to a leasehold interest of surface and subsurface areas within, and contiguous to the proposed permit area:

Surface and subsurface area contiguous to proposed permit area:

Bulger:

Neal R. & Linda Matchett
700 Candor Road
Bulger, PA 15019
Parcel Number: 570-007-00-00-0004-00

Lease:

- Right of Way (ROW) agreement with MarkWest Liberty Midstream & Resources, LLC.
- Oil & Gas with Dale Property Services Penn, LP

Michael G. & Jo Ann P. Duran
601 Candor Road
Bulger, PA 15019
Parcel Number: 550-013-00-00-0004-00

Lease:

- Right of Way (ROW) agreement with MarkWest Liberty Midstream & Resources, LLC.
- Oil & Gas with Dale Property Services Penn, LP

Mark & Laurie Crawford
651 Candor Road
Bulger, PA 15019
Parcel Number: 550-013-00-00-0004-01

Lease:

- Oil & Gas with Dale Property Services Penn, LP

William C. & Juanita Tague
5659 Sixth Street
Baldwin, PA 15236
Parcel Number: 550-013-00-00-0017-00

Lease:

- Right of Way (ROW) agreement with MarkWest Liberty Midstream & Resources, LLC.
- Oil, Gas & Coalbed methane with Range Resources – Appalachia, LLC.

Amber & Harold A. Dudenhoeffer
14367 S. Mosiertown Road
Meadville, PA 16335
Parcel Number: 550-013-00-00-0018-00

Lease:

- Right of Way (ROW) agreement with MarkWest Liberty Midstream & Resources, LLC.
- Oil & Gas with Dale Property Services Penn, LP

Rose Marie Shaffer
96 Milton Ct.
Inwood, WV 25428
Parcel Number: 550-016-00-00-0002-00

Lease:

- Right of Way (ROW) agreement with MarkWest Liberty Midstream & Resources, LLC.

Rose Marie Shaffer
96 Milton Ct.
Inwood, WV 25428
Parcel Number: 550-016-00-00-0004-00

Lease:

- Oil, Gas & Coalbed methane with Range Resources – Appalachia, LLC.

Adele Corp
520 Shaffer Road
Bulger, PA 15019
Parcel Number: 550-016-00-00-0006-00

Lease:

- Right of Way (ROW) agreement with MarkWest Liberty Midstream & Resources, LLC.

Joyce A. & Raymond J. Zalaznik, Jr.
77 Bulger Block Road
Bulger, PA 15019
Parcel Number: 570-006-00-00-0032-00

Lease:

- Oil & Gas with Dale Property Services Penn, LP
- Easement/ROW with Burgettstown-Smith Township Joint Sewage Authority

Raymond A. Scruppi
167 Bulger Candor Road
Bulger, PA 15019
Parcel Number: 570-006-00-00-0032-06

Lease:

- Oil & Gas with Dale Property Services Penn, LP
- Easement/ROW with Burgettstown-Smith Township Joint Sewage Authority
- Oil, Gas & Coalbed methane with Range Resources – Appalachia, LLC.

Yukon:

MAX owns the mineral rights below the Yukon facility. Also, MAX acquired ownership of the oil and gas rights for the facility. There is currently at least one lease of the oil and gas rights below the facility.

Response to Item B.6(a):

All officers in MAX Environmental Technologies, Inc. own stock and/or limited partnerships in publicly held corporations, which may be engaged in the business of solid waste collection, transportation, storage, processing, treatment, or disposal. None owns more than 5% of the outstanding shares or interest in any such company.

MAX Environmental Technologies, Inc.
5700 Corporate Drive, Suite 425
Pittsburgh, PA 15237

Response to Item B.6(b):

Robert Shawver is President of MAX Environmental Technologies, Inc.

Response to Item C.1:

MAX Environmental Technologies, Inc.
Bulger Facility
200 MAX Drive
Bulger, PA 15019

MAX Environmental Technologies, Inc.
Yukon Facility
233 MAX Lane
Yukon, PA 15698

Response to Item C.2:

Pennsylvania DEP Permits

PERMIT TYPE	NUMBER	DATE ISSUED	EXPIRATION DATE
YUKON FACILITY			
Hazardous Waste Storage/Treatment Facility	PAD004835146	6/12/1997	2/14/15 (renewal submitted)
Water Quality Management	6574202	08/13/1974	None
Water Quality Management	6576203	02/18/1977	None
Water Quality Management	6578208	03/09/1979	None
Water Obstruction/Encroachment	6574712	07/29/1974	None
Dam Safety	D65-146	06/26/1973	None
Solid Waste Disposal/Processing Facility	301071	6/27/17	06/27/2027
Dam Safety	D65-153	08/06/1976	None
Water Obstruction/Encroachment	E65-164	08/06/1986	None
Earth Disturbance	(65) 65-84-8-2	08/06/1986	None
NPDES	PA0027715	1/1/22	12/31/26
Dams and Waterways Management General Permit No. 8	E65-423	10/04/1989	None
Dams and Waterways Management General Permit No. 7	GP076591001	07/18/1991	None
Storage Tank	65-09872	11/07/2008	11/07/2018
Air Quality State Only Operation Permit	65-00101	10/1/2019	10/1/2024 (renewal submitted)
Bulger Facility			
Water Quality Management	6277205	03/31/1978	None
Water Quality Management	6385201	02/26/1987	None
NPDES	PA0044326	10/1/2019	9/20/2024 (renewal submitted)

Water Obstruction/Encroachment	6377706	03/31/1978	None
Water Obstruction/Encroachment	E63-165	10/04/1985	None
Water Obstruction/Encroachment	E63-358	19/09/1992	None
Dams and Waterways Management General Permit No. 4		07/24/1985	None

Response to Item C.3:

Type of Permit: Hazardous waste disposal permit for construction and operation of a new impoundment.
Application No.: EPA ID No. PAD004835146
Location: Yukon Facility – Impoundment No. 6
Denial Date: October 22, 1987
Reasons: DEP claimed *inter alia*, that the design did not comply with certain technical criteria for groundwater separation and other technical requirements (although the project was determined to qualify for issuance of a residual waster permit).

Response to Item C.4:

NONE

Date	Location	Permit/License/EPA ID#	Issuing Agency	Type of Action	Nature of Violation	Disposition	Dollar Amount of Penalty
8/13/2014	Bulger Facility	PAD059087072	DEP	Notice of Violation	MAX exceeded 6 acres of waste placement on Phase 3 & 4 of Impoundment 1 and did not start the cap & cover system as stated in Paragraph 7 of the amended COA.		$11,000
10/23/2017	Bulger Facility	NA	DEP	Notice of Violation	DEP alleged that MAX installed a groundwater monitoring network for proposed landfill without DEP approval	DEP requested MAX submit a plan to close the wells or a request for approval of the wells as a monitoring system	MAX submitted a rebuttal to the NOV and a request for approval of the wells as a monitoring system for the proposed landfill in November 2017
10/25/2017	Bulger Facility	PA0044326	DEP	Notice of Violation	DEP alleged that MAX exceeded NPDES discharge limits, missed a sampling event and allowed standing water in WWTP containment pit	DEP requested MAX provide an explanation of cause, corrective action steps and a schedule for corrective action	MAX submitted a response to DEP on 11/6/17 outlining probable causes, corrective actions and schedules
4/6/2018	Bulger Facility	PA0044326	DEP	Notice of Violation (eFacts entry only)	Documentation of claims that materials are not solid wastes or are conditionally exempt	MAX disagrees with the allegation of a violation since there was no notice of violation issued or an alleged violation of a regulation	
4/6/2018	Bulger Facility	PA0044326	DEP	COA	Reclassify wastewater treatment plant sludge as F039 hazardous waste until delisted.		None
6/29/2018	Bulger Facility	PA0044326	DEP	Notice of Violation	NPDES - Violation of effluent limits in Part A of permit		
6/4/2019	Bulger Facility	PA0044326	DEP	Consent Assessment of Civil Penalty	NPDES permit discharge limit exceedances	MAX signed the CACP and paid the fine.	$9,360.00
8/17/2021	Bulger Facility	PAD059087072	DEP	Notice of Violation	Alleged violation of beneficial use of waste COA for not completing re-closure of impoundments by a certain date	MAX and DEP signed an amended COA on 8.24.22 and MAX agreed to pay a penalty	$685,000.00
5/16/2023	Bulger Facility	PA0044326	DEP	Notice of Violation	Violation of effluent limits in permit in 2021 and 2022	MAX responded on 6/15/23 explaining probable cause for exceedances	
12/21/2023	Bulger Facility	PA0044326	EPA	Notice of Violation	Violation of effluent limits in permit in 2021 and 2022 and late DMR submittal	MAX responded on 1/25/24 explaining probable cause for exceedances and reason for late DMR submittal	
5/21/2014	Yukon Facility	301071	DEP	Notice of Violation	DEP cited MAX for not implementing the nuisance control plan nor properly addressing the alleged odor problem and for permitting the emission of an air contaminant off the property.	MAX rebutted each allegation via email on 7/11/14	
7/9/2014	Yukon Facility	PAD004835146	DEP	Notice of Violation	DEP alleged MAX did not comply with regulations in that it did not take precautions to prevent a reaction or fire.	MAX submitted a description and explanation of the 7/9/14 events (roll off box scrap fire) via email 7/18/14. This was not a hazardous waste permit violation.	
8/7/2014	Yukon Facility	301071	DEP	Notice of Violation	DEP alleged that MAX did not maintain a 2 foot freeboard on Impoundment 6.	MAX rebutted this allegation by email on 9/3/14	
8/26/2014	Yukon Facility	PAD004835146	DEP	Notice of Violation	DEP cited MAX because containers were not labeled properly, containers were not managed to prevent leaks and spills and containers were improperly tarped.	MAX rebutted these allegations via email on 10/6/14. Noted as corrected by DEP in a hazardous waste inspection report dated 10/31/14	
8/28/2014	Yukon Facility	301071	DEP	Notice of Violation	DEP cited MAX for violating SWMA, failure to perform inspections to evaluate waste management practices in reducing the potential for off-site odors and failure to promptly address/correct problems discovered during inspections.		
9/19/14 (signed by DEP 10/2/14)	Yukon Facility	PAD004835146	DEP	Notice of Violation	DEP alleged MAX violated SWMA, failed to inspect container storage areas weekly, did not manage containers to prevent leaks and did not properly close containers during storage.	MAX rebutted these allegations via email on 11/10/14. Noted as corrected by DEP in an inspection report dated 10/31/14	
11/18/14 (signed by MAX and DEP 12/29/14)	Yukon Facility	PAD004835146	DEP	Notice of Violation	DEP cited MAX for hazardous waste containers leaking onto the ground and for not performing a radiation source check for each day the facility is in operation (weekends)	MAX rebutted these allegations	
5/21/2015	Yukon Facility	301071	DEP	Notice of Violation	DEP cited MAX for not preventing the tracking of mud or debris off-site		
8/3/2015	Yukon Facility	301071	DEP	CACP	MAX did not follow its approved Radiation Protection Action Plan by using a hand held radiation detector with an outdated calibration certificate on 16 truckloads of incoming waste that triggered the portal radiation monitor		$48,000
8/6/2015	Yukon Facility	301071	DEP	COA	MAX failed to prevent tracking of mud onto roadways outside of the facility property boundary and failed to prevent odors from crossing the property line.		$70,000
8/26/2015	Yukon Facility	NPDES PA0027715	DEP	CACP	MAX violated its NPDES permit by submitting monthly eDMRs late (beyond the 28th day of the following month) and failing to comply with certain effluent limits.		$2,360
9/14/15 (10/5/15)	Yukon Facility	301071	DEP	Notice of Violation/Penalty Assessment	Violation of COA for failing prevent off-site odors		$2,500
9/17/2015	Yukon Facility	301071	DEP	Notice of Violation	Failure to prevent off-site odors		
9/29/15 (10/21/15)	Yukon Facility	301071	DEP	Notice of Violation/Penalty Assessment	Violation of COA for failing to prevent off-site odors		$2,500
10/1/2015	Yukon Facility	301071	DEP	Notice of Violation	Failure to prevent off-site odors		
10/21/2015	Yukon Facility	301071	DEP	Penalty assessment of 10/1/15 violation	Violation of COA for failing to prevent off-site odors		$2,500
10/8/2015	Yukon Facility	301071	DEP	Notice of Violation	Failure to prevent off-site odors		
10/15/2015	Yukon Facility	301071	DEP	Notice of Violation	Failure to prevent off-site odors		
10/16/15 (11/23/15)	Yukon Facility	301071	DEP	Notice of Violation/Penalty Assessment	Violation of COA for failing to prevent off-site odors		$2,500
10/23/2015	Yukon Facility	301071	DEP	Notice of Violation	Failure to prevent off-site odors		
10/29/2015	Yukon Facility	301071	DEP	Notice of Violation	Failure to prevent off-site odors		
11/13/2015	Yukon Facility	301071	DEP	Notice of Violation	Failure to prevent off-site odors		
11/16/15 (12/2/15)	Yukon Facility	301071	DEP	Notice of Violation/Penalty Assessment	Violation of COA for failing to prevent off-site odors		$2,500
11/16/2015	Yukon Facility	301071	DEP	Penalty Assessment	Violation of COA for failing to prevent off-site odors		$2,500
11/24/2015	Yukon Facility	301071	DEP	Notice of Violation	Failure to prevent off-site odors		
12/18/2015	Yukon Facility	301071	DEP	Notice of Violation	Failure to prevent tracking of mud off-site		
12/29/2015	Yukon Facility	301071	DEP	Notice of Violation	Failure to prevent off-site odors		
12/30/2015	Yukon Facility	301071	DEP	Notice of Violation	Failure to prevent tracking of mud off-site		
1/11/2016	Yukon Facility	301071	DEP	Notice of Violation	Failure to prevent off-site odors		
1/26/16 (2/18/16)	Yukon Facility	301071	DEP	Notice of Violation/Penalty Assessment	Violation of COA for failing to prevent off-site odors		$2,500

1/29/16 (2/18/16)	Yukon Facility	301071	DEP	Notice of Violation/Penalty Assessment	Violation of COA for failing to prevent off-site odors		$2,500
2/1/2016	Yukon Facility	301071	DEP	Notice of Violation	Failure to prevent off-site odors		
2/4/16 (2/26/16)	Yukon Facility	301071	DEP	Notice of Violation/Penalty Assessment	Violation of COA for failing to prevent off-site odors and tracking of mud off-site		$2,750
2/5/16 (2/26/16)	Yukon Facility	301071	DEP	Notice of Violation/Penalty Assessment	Violation of COA for tracking of mud off-site		$250
2/11/2016	Yukon Facility	301071	DEP	Notice of Violation	Failure to prevent off-site odors		
2/19/2016	Yukon Facility	301071	DEP	Penalty Assessment for 2/11 Violation	Violation of COA for failing to prevent off-site odors		$2,500
5/6/16 (for 12/28/15 inspection)	Yukon Facility	PAD004835146	DEP	Notice of Violation	DEP alleged that accumulated stormwater that discharged out of a waste containment area constituted disposal of solid waste	MAX disputes this allegation as there was no evidence of solid waste disposal or any contaminated stormwater discharge	
5/6/2016	Yukon Facility	PAD004835146	DEP	Notice of Violation	DEP alleged that waste containers were not properly closed, were in contact with accumulated stormwater and not managed to prevent leaks	MAX disputes this allegation in that the containers in question were covered and there was no evidence of any leakage	
5/26/2016	Yukon Facility	AQ plan approval PA-65-00101C	DEP	Notice of Violation	DEP alleged that MAX did not submit a request for a plan approval extension for operating equipment in a timely manner	MAX disputes this allegation because the equipment covered by the plan approval was not in operation for nearly two years	
6/15/2016	Yukon Facility	301071	DEP	Notice of Violation	DEP alleged that MAX exceeded its disposal capacity for Impoundment 6	MAX disputes this allegation because Impoundment 6 does not have a defined capacity limit and since the waste fill was not at final elevations	
9/21/2016	Yukon Facility	301071	DEP	Consent Order and Agreement	DEP alleged that MAX exceeded its disposal capacity for Impoundment 6	MAX and DEP entered into a COA	$307,000
9/28/2016	Yukon Facility	NA	USEPA	Consent Agreement and Final Order ("CAFO")	EPA alleged that MAX failed to submit EPCRA Tier 2 chemical release reports for 2012-2015 in a timely manner	MAX and EPA entered into a CAFO	$60,000
11/16/2016	Yukon Facility	301071	DEP	COA Amendment	DEP alleged that MAX failed to submit a bond increase in a timely manner	MAX and DEP entered into an amended COA	$5,000
1/9/2017	Yukon Facility	301071	DEP	COA Amendment	DEP alleged that MAX failed to submit a bond increase in a timely manner	MAX and DEP entered into an amended COA	$3,000
1/27/2017	Yukon Facility	301071	DEP	Notice of Violation	DEP alleged that MAX allowed uncontrolled fugitive dust emissions causing a nuisance on 11/23/16		
4/19/2017	Yukon Facility	301071	DEP	COA	DEP alleged that MAX did not complete construction of a new leachate storage tank in the timeframe required by a permit	MAX and DEP signed a COA with a penalty assessment to resolve the allegation	$25,000/month until tank construction certification is submitted to DEP
8/21/2017	Yukon Facility	PA0027715	DEP	Notice of Violation	DEP alleged several NPDES effluent limit exceedances in 2016	DEP requested MAX provide an explanation of cause, corrective action steps and a schedule for corrective action	MAX submitted a response to DEP on 8/31/17 outlining probable causes, corrective actions and schedules
3/28/2018	Yukon Facility	301071	DEP	COA Amendment	Reclassify wastewater treatment plant sludge as F039 hazardous waste until delisted		
8/14/2018	Yukon Facility	65-09872	DEP	Notice of Violation (eFacts entry only)	Failure to meet performance and design standards	Corrected/Abated	
8/14/2018	Yukon Facility	65-09872	DEP	Notice of Violation (eFacts entry only)	Leak detection violations	Corrected/Abated	
9/11/2018	Yukon Facility	301071	DEP	Notice of Violation	Unauthorized release of residual waste leachate from a storage tank system	Corrective actions are being implemented by MAX	
9/28/2018	Yukon Facility	301071	DEP	Notice of Violation	Proper barriers are not installed and access to the site is uncontrolled when attendant not present.	MAX disagrees with the alleged violation because fencing is in place, the facility is inspected daily and we have security guards at night and on weekends	
11/16/2018	Yukon Facility	301071	DEP	Notice of Violation	Failure to close and cap the Phase 1 of Landfill 6 area by 10/31/18	MAX disagrees with DEP's allegation since a request to extend the closure date was first submitted to DEP on April 24, 2018 and revised on August 2, 2018	
5/30/2019	Yukon Facility	301071	DEP	Notice of Violation	Handles solid waste contrary to rules and regulations, or orders of the Department, or any permit condition, or in any manner as to create a public nuisance.	Corrected/Abated	
5/30/2019	Yukon Facility	301071	DEP	Notice of Violation	Person or municipality has violated Act 97, Department regulation, order, or term of permit.	Corrected/Abated	
5/30/2019	Yukon Facility	301071	DEP	Notice of Violation	Residual waste landfill is not operated in accordance with approved plans and permit.	Corrected/Abated	$25,000 for 5/30/20 & 9/11/18
7/30/2019	Yukon Facility	PA0027715	DEP	Notice of Violation	NPDES - Violation of effluent limits in Part A of permit		
9/27/2019	Yukon Facility	301071	DEP	Notice of Violation	Proper barriers are not installed and access to the site is uncontrolled when attendant not present.	MAX disagrees with the alleged violation because fencing is in place, the facility is inspected daily and we have security guards at night and on weekends	
2/10/2020	Yukon Facility	301071	DEP	Notice of Violation	Residual waste landfill is not operated in accordance with approved plans and permit.	MAX disagrees with the alleged violation because MAX was not responsible for the trucking company following the approved truck route	
2/21/2020	Yukon Facility	PA0027715	DEP	Notice of Violation	NPDES - Violation of effluent limits in Part A of permit		
6/30/2020	Yukon Facility	PA0027715	DEP	Notice of Violation	NPDES - Failure to properly operate and maintain all facilities which are installed or used by the permittee to achieve compliance NPDES - Failure to monitor pollutants as required by the NPDES permit	MAX disagrees with the alleged violation because there were no erosion, effluent discharge, or stormwater sampling problems or violations on the date in question.	
2/8/2021	Yukon Facility	301071	DEP	Notice of Violation	Daily cover does not meet performance and desgin requirements. There is open burning. Contingency plan is not implemented when appropriate. Uniform daily cover is not applied as required	MAX disagrees with the alleged violations because because there was no open burning, daily cover is applied at end of day per permit, and there was no need to implement our contingency plan	

5/5/2021	Yukon Facility	301071	DEP	Notice of Violation	Groundwater monitoring plan does not meet current DEP requirements	MAX disagrees with the alleged violations because DEP approved the current plan. However, MAX has submitted a revised plan to address DEP comments.	
7/20/2021			DEP	Notice of Violation	Violation of effluent limits in Part A of permit	Measures have been implemented earlier this year to minimize the potential for exceedances including system maintenance and adjusting chemical treatment	
12/30/2021	Yukon	PA0027715	DEP	CACP	Violation of effluent limits in Part A of permit	Corrected/Abated	$28,500
4/13/2022	Yukon	301071	DEP	Notice of Violation	Daily cover is not applied within time limits	MAX disagrees with the alleged violations because daily cover is applied at end of day per permit	
4/13/2022	Yukon	301071	DEP	Notice of Violation	Intermediate slopes exceed 50% slope.	MAX disagrees with the alleged violations because they appear to be based on visual judgement.	
4/13/2022	Yukon	301071	DEP	Notice of Violation	The landfill working face size is unsuitable for compaction and daily covering.	MAX disagrees with the alleged violations because waste was still being placed in the working face area and daily cover is applied at end of day per permit	
4/13/2022	Yukon	301071	DEP	Notice of Violation	Intermediate cover is not applied as required.	MAX has applied additional intermediate cover	
5/12/2022	Yukon	PA0027715	DEP	Notice of Violation	Failure to meet effluent limits set in Part A of the NPDES permit		
5/19/2022	Yukon	301071	DEP	Notice of Violation	Residual waste landfill is not operated in accordance with approved plans and permit.	MAX disagrees with the alleged violations because approved operations plan authorizes stabilization of saturated wastes with drier materials within the landfill	
11/3/2022	Yukom	PAC650145	WCD	Notice of Violation	Alleged insufficient vegetative cover and some erosion problems,	MAX resolved alleged violations based on restoration work. Confirmed on inspection report 1/4/2023	
4/5/2023	Yukon	301071	DEP	Notice of Violation	Fails to control leachate, runoff, discharges from residual waste landfill.	Seep outbreak remediated	
11/9/2023	Yukon	PA0027715	DEP	Notice of Violation	Failure to meet effluent limits in NPDES permit; alleged WWTP operational violations	MAX disagrees with alleged WWTP operational violations. Rebuttal sent to DEP on 11/17/23	
12/21/2023	Yukon	PA0027715 and PAD004835146	EPA	Notice of Violation	Various CWA and RCRA alleged violations	MAX responded on 1/25/24 explaining corrective actions and rebutting certain allegatoins	
1/26/2024	Yukon	PAD004835146	DEP	Notice of Violation	Various RCRA alleged violations	MAX responded on 2/9/24 rebutting all of the allegations	
4/5/2024	Yukon	PAD004835146/301071	DEP	Notice of Violation	Repeat of alleged RCRA violations from the 1/16/24 NOV plus alleged violation of RW leachate storage capacity regulation	MAX rebutted all of the allegations	
4/19/2024	Yukon	PAD004835146	EPA	Consent Order	Requires containment building repair and assessment, waste treatment audit and GW sampling	MAX has begun corrective action	NA

Delaware

The First State

I, JEFFREY W. BULLOCK, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY THE ATTACHED IS A TRUE AND CORRECT COPY OF THE CERTIFICATE OF FORMATION OF "MAX ENVIRONMENTAL ACQUISITION, LLC", FILED IN THIS OFFICE ON THE THIRTEENTH DAY OF JANUARY, A.D. 2017, AT 6:25 O'CLOCK P.M.

Jeffrey W. Bullock, Secretary of State

6281922 8100
SR# 20170235417

Authentication: 201877881
Date: 01-17-17

You may verify this certificate online at corp.delaware.gov/authver.shtml

State of Delaware
Secretary of State
Division of Corporations
Delivered 04:25 PM 01/13/2017
FILED 04:25 PM 01/13/2017
SR 20170213417 - File Number 6361922

CERTIFICATE OF FORMATION
OF
MAX ENVIRONMENTAL ACQUISITION, LLC

THE UNDERSIGNED, an authorized natural person, for the purpose of forming a limited liability company under the provisions and subject to the requirements of the State of Delaware (particularly Chapter 18, Title 6, Section 18-201 of the Delaware Limited Liability Company Act and the acts amendatory thereof and supplemental thereto) hereby certifies that:

FIRST: The name of this limited liability company is Max Environmental Acquisition, LLC.

SECOND: The address of the registered office of this limited liability company in the State of Delaware is Corporation Trust Center, 1209 Orange Street, Wilmington, Delaware 19801, County of New Castle. The name of this limited liability company's registered agent for service of process at such address is The Corporation Trust Company.

THIRD: This limited liability company shall exist in perpetuity.

The undersigned has executed this Certificate of Formation of Max Environmental Acquisition, LLC on January 13, 2017.

Table 3 - Monitoring Parameters
MAX Yukon Facility

PARAMETER	RATIONALE	FREQUENCY	PARAMETER	RATIONALE	FREQUENCY
Dissolved Metals (mg/l)			**Total Metals (mg/l)**		
Arsenic	288.254(a)(3)	Quarterly	Arsenic	288.254(a)(3)	Annually
Barium	288.254(a)(3)	Quarterly	Barium	288.254(a)(3)	Annually
Cadmium	288.254(a)(3)	Quarterly	Cadmium	288.254(a)(3)	Annually
Calcium	288.254(a)(1)	Quarterly	Calcium	288.254(a)(1)	Annually
Chromium	288.254(a)(3)	Quarterly	Chromium	288.254(a)(3)	Annually
Copper	288.254(a)(3)	Quarterly	Copper	288.254(a)(3)	Annually
Iron	288.254(a)(1)	Quarterly	Iron	288.254(a)(1)	Annually
Lead	288.254(a)(3)	Quarterly	Lead	288.254(a)(3)	Annually
Magnesium	288.254(a)(1)	Quarterly	Magnesium	288.254(a)(1)	Annually
Manganese	288.254(a)(1)	Quarterly	Manganese	288.254(a)(1)	Annually
Mercury	288.254(a)(3)	Quarterly	Mercury	288.254(a)(3)	Annually
Nickel	2020 Assessment	Quarterly	Nickel	2020 Assessment	Annually
Potassium	288.254(a)(1)	Quarterly	Potassium	288.254(a)(1)	Annually
Selenium	288.254(a)(3)	Quarterly	Selenium	288.254(a)(3)	Annually
Sodium	288.254(a)(1)	Quarterly	Sodium	288.254(a)(1)	Annually
Silver	288.254(a)(3)	Quarterly	Silver	288.254(a)(3)	Annually
Zinc	288.254(a)(3)	Quarterly	Zinc	288.254(a)(3)	Annually
General Chemistry (mg/l)					
Alkalinity, total	288.254(a)(1)	Quarterly			
Ammonia	288.254(a)(1)	Quarterly			
Bicarbonate	288.254(a)(1)	Quarterly			
Chemical Oxygen Demand	288.254(a)(1)	Quarterly			
Chloride	288.254(a)(1)	Quarterly			
Cyanide, total	2020 Assessment	Annually			
Fluoride	288.254(a)(1)	Quarterly			
Nitrate	288.254(a)(1)	Quarterly			
pH	288.254(a)(1)	Quarterly			
Phenolics	2020 Assessment	Annually			
Specific Conductance	288.254(a)(1)	Quarterly			
Sulfate	288.254(a)(1)	Quarterly			
Total Dissolved Solids	288.254(a)(1)	Quarterly			
Total Organic Carbon	288.254(a)(1)	Quarterly			
Total Organic Halogens (TOX)	288.254(a)(5)	Quarterly			
Turbidity	288.254(a)(1)	Quarterly			
Organics (ug/l)					
1,1,1-Trichloroethane	288.254(a)(4)	Annually			
1,1-Dichloroethane	288.254(a)(4)	Annually			
1,1-Dichloroethene	288.254(a)(4)	Annually			
1,2-Dibromoethane (EDB)	288.254(a)(4)	Annually			
1,2-Dichloroethane	288.254(a)(4)	Annually			
Benzene	288.254(a)(4)	Annually			
cis-1,2-Dichloroethene	288.254(a)(4)	Annually			
Ethylbenzene	288.254(a)(4)	Annually			
Methylene chloride	288.254(a)(4)	Annually			
Naphthalene	2020 Assessment	Annually			
Tetrachloroethene	288.254(a)(4)	Annually			
Toluene	288.254(a)(4)	Annually			
trans-1,2-Dichloroethene	288.254(a)(4)	Annually			
Trichloroethene	288.254(a)(4)	Annually			
Vinyl chloride	288.254(a)(4)	Annually			
Xylenes (total)	288.254(a)(4)	Annually			

Table 4 - Summary of Monitoring Points
MAX Yukon Landfill

Monitoring Point	Upgradient/ Downgradient	Purpose	Compliance Monitoring Point?	Monitored Stratigraphic Zone
Monitoring Wells				
RC-1	Downgradient	Water Quality	No	Redstone Coal
RC-2	Downgradient	Water Quality	No	Redstone Coal
RC-5	Downgradient	Water Quality	No	Redstone Coal
RC-6A	Downgradient	Water Quality	Yes	Redstone Coal
W-2	Downgradient	Water Quality	Yes	Redstone Coal
W-8	Upgradient	Water Quality	No	Redstone Coal
PC-1	Downgradient	Water Quality	No	Pittsburgh Coal
PC-2	Upgradient	Water Quality	No	Pittsburgh Coal
PC-3	Downgradient	Water Quality	Yes	Pittsburgh Coal
PC-5	Downgradient	Water Quality	No	Pittsburgh Coal
PC-7	Downgradient	Water Quality	No	Pittsburgh Coal
PC-8	Downgradient	Water Quality	No	Pittsburgh Coal
PC-9	Downgradient	Water Quality	Yes	Pittsburgh Coal
SP-2	Downgradient	Water Quality	No	Pittsburgh Coal/Mine Spoil
SP-3	Downgradient	Water Quality	No	Pittsburgh Coal/Mine Spoil
MW-702-PC	Cross-Gradient	Water Quality	Yes	Pittsburgh Coal
MW-704-PC	Downgradient	Water Quality	Yes	Pittsburgh Coal
W-4	Downgradient	Water Quality	No	Pittsburgh Limestone
W-5	Downgradient	Water Quality	No	Pittsburgh Limestone
W-6	Downgradient	Water Quality	Yes	Pittsburgh Limestone
W-9	Upgradient	Water Quality	No	Pittsburgh Limestone
W-10	Downgradient	Water Quality	Yes	Pittsburgh Limestone
W-11*	Downgradient	Water Quality	No	Pittsburgh Limestone
W-12	Downgradient	Water Quality	No	Pittsburgh Limestone
W-13	Downgradient	Water Quality	No	Pittsburgh Limestone
MW-701-LS	Upgradient	Water Quality	No	Pittsburgh Limestone
MW-702-LS	Crossgradient	Water Quality	Yes	Pittsburgh Limestone
MW-704-LS	Downgradient	Water Quality	Yes	Pittsburgh Limestone
Recovery Wells				
PW-1	Downgradient	Water Quality	No	Pittsburgh Coal
PW-2	Downgradient	Water Quality	Yes	Pittsburgh Coal
PW-3	Downgradient	Water Quality	No	Pittsburgh Coal
Residential Wells				
Gardner (Jones)	Upgradient	Water Quality	No	Unknown
Kiselich	Upgradient	Water Quality	No	Unknown
Reinstadler	Cross-Gradient	Water Quality	No	Unknown
Mine Discharges				
MD-A	Downgradient	Water Quality	No	Pittsburgh Coal Mine Discharge
MD-B	Downgradient	Water Quality	No	Pittsburgh Coal Mine Discharge
Surface Water				
S-A	Downgradient	Water Quality	No	Impoundment No. 3
S-B	Downgradient	Water Quality	No	Impoundment No. 3
S-C	Downgradient	Water Quality	No	Impoundment No. 5
S-D	Downgradient	Water Quality	No	Impoundment No. 5
S-E	Downgradient	Water Quality	No	Impoundment No. 5
S-F	Downgradient	Water Quality	No	Impoundment No. 5
S-H	Downgradient	Water Quality	No	Impoundment No. 5
Leachate Monitoring Points				
Impoundment 3 Seep	Downgradient	Leachate Detection	No	NA
Impoundment 5 Blanket Drain	Downgradient	Leachate Detection	No	NA
Impoundment 5 Bench Drain	Downgradient	Leachate Detection	No	NA
Landfill 6 Blanket Drain	Downgradient	Leachate Detection	No	NA
Landfill 6 LDZ	Downgradient	Leachate Detection	No	NA
Landfill 6 LCS	Downgradient	Leachate Detection	No	NA
Township Road Drain	Downgradient	Leachate Detection	No	NA
Township Road Drain Tank	Downgradient	Leachate Detection	No	NA
North Toe Tank	Downgradient	Leachate Detection	No	NA
East Toe Tank	Downgradient	Leachate Detection	No	NA
South Toe Tank	Downgradient	Leachate Detection	No	NA

* MAX may petition to remove after 4 quarters of monitoring

March 20, 2020

Mr. Carl Spadaro
Environmental General Manager
MAX Environmental Technologies, Inc.
651 Holiday Drive - Foster Plaza #5
Pittsburgh, PA 15220
Delivered via email: cspadaro@maxenvironmental.com

Dear Mr. Spadaro:

Subject: Transmittal
Landfill No. 6 Revised Bonding Worksheets
MAX Environmental Technologies, Inc. – Yukon Facility
South Huntingdon Township, Westmoreland County, Pennsylvania
CEC Project 170-822.0802

At the request of MAX Environmental Technologies, Inc. (MAX), Civil & Environmental Consultants, Inc. (CEC) has prepared updates to the Bonding Worksheets for the existing Landfill No. 6, at MAX's Yukon Facility. Revisions included updating the groundwater and surface water monitoring requirements to match current requirements at the site, and updating general cost/accounting issues with the previous submitted version.

As shown in the attached Revised Bonding Worksheets, CEC determined the required financial assurance as of March 2020 to be $4,751,363. The current Landfill No. 6 bonded amount is $5,313,502. Therefore, the difference between the currently bonded amount and the proposed bonded amount is $562,139.

CEC trusts these Revised Bonding Worksheets for Landfill No. 6 are adequate to meet your needs at this time. However, should you have any questions concerning this request, please call Mr. Carl Spadaro at (724) 722-3500 or us at (724) 327-5200.

Very truly yours,

CIVIL & ENVIRONMENTAL CONSULTANTS, INC.

David V. Spang, P.E.
Assistant Project Manager

Timothy D. Mitchell, P.E.
Senior Project Manager

DVS/TDM:hm
Attachments

L-170822.0802.Mar20/P

REVISED BONDING WORKSHEETS

BONDING WORKSHEETS
FOR
Landfills and Disposal Impoundments

Revised November 2012
Revised March 2020

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF AND WASTE MANAGEMENT

General Information

Permits: Please list all permits, approvals, licenses, registrations, other bonds, etc. for this facility.

I.D.#[1]	Authority[2]	Summary[3]
301071	DEP-Waste Management Southwest Region	Residual Waste Disposal Impoundment
PA0027715	DEP- Water Quality Management Southwest Region	NPDES Permit for new and Existing Industrial Discharge (Leachate Treatment Plant and Stormwater Outfalls)
65-00101C	DEP- Air Quality Management Southwest Region	Minor Facility Plan Approval State Regulation

1. *List the permit I.D. number, registration number, etc. If there is no number, put in "none".*
2. *List the issuing authority's name, address and telephone number*
3. *List any closure features or monitoring requirements. As examples: For storage tanks, list the number, type and size of tanks. For NPDES permits list the number of outfalls to be monitored and ponds/plants to be maintained and/or closed.*

Date Prepared		I.D. Number
MARCH 2020	COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF WASTE MANAGEMENT	301071

BONDING WORKSHEET A
DECONTAMINATING THE FACILITY

Project Summary[1]: **Assume that the existing Landfill No. 6 at MAX Environmental Technologies – Yukon Facility closure prematurely, prior to completion of closure activities. It is anticipated that solid waste remaining onsite will be incorporated into the Landfill No. 6 waste mass. Equipment remaining in the impoundment, such as machinery and roll-off boxes, would require decontamination prior to removing the equipment from the facility.**

1.	Maximum volume of solid waste required to be moved or disposed as part of closure (includes cost for solidification).	Not Applicable
2.	Estimated volume of contaminated soils or materials (from accidents, spills, prior remediation's).	Not Applicable
3.	Total volume of waste (line 1 + line 2).	Not Applicable
4	Unit cost to dispose off-site (include any analyses or transportation cost).	Not Applicable
5	Total cost to dispose of waste (line 3 x line 4).	Not Applicable
6	Estimated volume of contaminated liquid generated during decontamination.	8,000 gal
7.	Unit cost to treat/dispose of contaminated liquids (including any transportation)	$ 0.00538gal
8.	Total cost to dispose of contaminated liquids (line 6 x line 7).	$ 500
9.	Estimated volume of fill material	Not Applicable
10.	Unit cost of acquiring, transporting, placing and stabilizing (i.e. revegetating) fill material (include costs for off-site purchase if soil not available on-site).	Not Applicable
11.	Total cost to fill (line 9 x line 10).	Not Applicable
12.	Equipment decontamination cost	$ 4,663 LS
Total cost – all Worksheet A		$ 5,163

(Put final total on summary cost sheet – line 1)

[1] *List the areas/equipment that will need to be decontaminated and include any assumptions made. Multiple sheets should be used to estimate the costs for different areas.*

CALCULATION BRIEF

BONDING WORKSHEET A
DECONTAMINATING THE FACILITY

OBJECTIVE: **Determine the total bond amount required for the decontamination of the facility at the time of closure.**

METHODOLOGY: Estimate material quantities and disposal costs associated with decontamination of the MAX Environmental Technologies, Inc. (MAX) – Yukon Facility, as required in Pennsylvania Department of Environmental Protection (DEP) Bonding Worksheet A.

REFERENCES:

1. RSMeans, CostWorks Version 16.03, 2019
2. Bureau of Labor Statistics; May 2018 National Industry-Specific Occupational Employment and Wage Estimates.

LINE ITEM ASSUMPTIONS AND CALCULATIONS

1. It is assumed that any waste on-site remaining from active disposal operations (prior to closure) will be incorporated into the waste mass during daily operations. Therefore, it is assumed separate off-site disposal of solid waste delivered to the site prior to closure is not necessary.
2. No contaminated soils are anticipated
3. Not Applicable.
4. Not Applicable.
5. Not Applicable.
6. The decontamination effort addressed in Bonding Worksheet A is for heavy equipment related to Landfill No. 6 operations that will need to be removed if MAX experiences a premature closure. The decontamination effort will be performed to remove waste accumulated on heavy mobile equipment surfaces (i.e., tracks, buckets, under carriage, etc.) which will need removed prior to performing closure activities at the site. Equipment anticipated to be remaining if a premature closure occurs at the facility includes the following:

- 1 Bull Dozer;
- 2 Excavators;
- 1 Compactor; and
- 4 Solidification Boxes.

The decontamination effort will include using a pressure steam cleaner to remove any accumulated waste on the equipment. Equipment will be pressure steam cleaned which generate steam pressures of 600 pounds per square inch (psi) at a temperature of 300 degrees Fahrenheit. This pressure and temperature are deemed adequate to decontaminate equipment without the need for additional surfactants, detergents, or a solvent other than water. Areas to be cleaned include surfaces that would regularly come in contact with the residual waste or soil, including the bucket on the excavator, tracks on the heavy equipment, etc.

Additionally, the onsite tire washing station and truck scale will need decontaminated. These efforts will also be performed with a pressure steam cleaner.

From Ref. No. 1, the daily output for typical pressure steam cleaning is 2,000 square feet per day (ft^2/day). Based on the list of equipment and areas to be decontaminated, it is anticipated that this effort can be completed in 2 days; however, for estimating purposes, 40 hours was assumed.

Other items associated with Impoundment No. 6 operations (e.g., waste water treatment plant, leachate storage tanks, etc.) will remain onsite and operational and will therefore not require decontamination.

Wastewater will be generated during decontamination of onsite equipment. The volume estimate assumes that a typical 200 gallon per hour steam cleaner will be operated for approximately 1 week (40 hours) to decontaminate the facility equipment. The volume of liquid to be treated is 8,000 gallons (200 gal/hr x 40 hrs).

7. It is assumed that liquid wastes will be treated on-site. The on-site third-party unit treatment cost for liquid waste is approximately $0.00538 per gallon as calculated in Worksheet I.

8. As instructed in Line Item 8, the total cost to dispose of contaminated liquids as calculated by multiplying lines 6 and 7, as follows:

Total cost to dispose of contaminated liquids = 8,000 gals x $0.00538/gal

Total cost to dispose of contaminated liquids = $43

Regardless of the cost calculated above, $500 was conservatively assumed for this line item to allow for additional cost contingencies associated with the disposal of contaminated liquids.

9. No fill material is anticipated as part of the decontamination activities.

10. See Item 9.

11. See Item 9.

12. Referring to the description for Line Item 5 above, the equipment decontamination cost assumes a metal pressure steam cleaning crew will be on-site for 40 hours. Using the attached unit costs from the Bureau of Labor Statistics for an Environmental Engineering Technician ($23.94/hour) and steam cleaner rental ($579.48/week) (see attached Means CostWorks estimate), the cost to decontaminate the equipment is as follows:

Equipment Decontamination Cost = (40 hours x $23.94/hour) + (1 week x $579.48/week)

= $1,538

Additionally, MAX has included a weekly rental cost for a vacuum truck ($2,247/week) (see attached Means CostWorks estimate) to be used to collect liquid generated from the steam cleaning. The liquid will then be transferred to MAX's onsite leachate treatment station. Estimated costs for the vacuum truck are as follows:

Vacuum Truck Cost = 1 week x $2,247/week

= $2,247

Also, a truck driver will be required to operate the vacuum truck. Costs were estimated using Reference No. 2 for a truck driver $21.93/hour.

Skilled Workers Cost = 40 hours x $21.93/hour

= $878

Therefore, the total cost to decontaminate the facility is as follows:

Total Decontamination Cost = $1,538 + $2,247 + $878 = $4,663

REFERENCE NO. 1

RS MEANS UNIT COSTS

MAX Environmental Technologies, Inc.
Impoundment No. 6

RSMeans Costworks Unit Prices

Worksheet A

Description	Unit	Daily Output	Bare Material	Bare Labor	Bare Equipment	Bare Total	Total Incl. O&P
Rent steam cleaner; 200 gallons per hour	Week	---	$0.00	$0.00	$526.80	$526.80	$579.48
Metal cleaning, steel surface treatment, 600 psi @ 300 F steam cleaning, 1250 - 5000 S.F./day	S.F.	2,000.00	$0.00	$0.20	$0.00	$0.20	$0.31
Rent vacuum truck, hazardous material, 5000 gallons	Week	---	$0.00	$0.00	$2,042.00	$2,042.00	$2,246.20

REFERENCE NO. 2

BUREAU OF LABOR STATISTICS; MAY 2018 NATIONAL INDUSTRY-SPECIFIC OCCUPATIONAL EMPLOYMENT AND WAGE ESTIMATES

Occupational Employment Statistics

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May 2018 National Industry-Specific Occupational Employment and Wage Estimates

NAICS 561200 - Facilities Support Services

These national industry-specific occupational employment and wage estimates are calculated with data collected from employers of all sizes, in metropolitan and nonmetropolitan areas in every state and the District of Columbia, in NAICS 561200 - Facilities Support Services.

Additional information, including the hourly and annual 10th, 25th, 75th, and 90th percentile wages, and the percent of establishments reporting the occupation, is available in the downloadable XLS files.

NAICS 561200 - Facilities Support Services is part of: NAICS 561000 - Administrative and Support Services.

Links to OES estimates for other industries

SOC Major Groups in NAICS 561200 - Facilities Support Services:

- 00-0000 All Occupations
- 11-0000 Management Occupations
- 13-0000 Business and Financial Operations Occupations
- 15-0000 Computer and Mathematical Occupations
- 17-0000 Architecture and Engineering Occupations
- 19-0000 Life, Physical, and Social Science Occupations
- 21-0000 Community and Social Service Occupations
- 23-0000 Legal Occupations
- 25-0000 Education, Training, and Library Occupations
- 27-0000 Arts, Design, Entertainment, Sports, and Media Occupations
- 29-0000 Healthcare Practitioners and Technical Occupations
- 31-0000 Healthcare Support Occupations
- 33-0000 Protective Service Occupations
- 35-0000 Food Preparation and Serving Related Occupations
- 37-0000 Building and Grounds Cleaning and Maintenance Occupations
- 39-0000 Personal Care and Service Occupations
- 41-0000 Sales and Related Occupations
- 43-0000 Office and Administrative Support Occupations
- 47-0000 Construction and Extraction Occupations
- 49-0000 Installation, Maintenance, and Repair Occupations
- 51-0000 Production Occupations
- 53-0000 Transportation and Material Moving Occupations

To sort this table by a different column, click on the column header

NAICS 561200 - Facilities Support Services

Display All records

Filter Table by Text: Text search table: 17-3022

Occupation code	Occupation title (click on the occupation title to view an occupational profile)	Group	Employment	Employment RSE	Percent of total employment	Median hourly wage	Mean hourly wage	Annual mean wage	Mean wage RSE
17-3022	Civil Engineering Technicians	detail	250	30.3%	0.16%	$22.74	$23.94	$49,800	4.0%

Showing 1 to 1 of 1 entries (filtered from 338 total entries)

About May 2018 National Industry-Specific Occupational Employment and Wage Estimates

(1) Estimates for detailed occupations do not sum to the totals because the totals include occupations not shown separately. Estimates do not include self-employed workers.

(2) Annual wages have been calculated by multiplying the hourly mean wage by a "year-round, full-time" hours figure of 2,080 hours; for those occupations where there is not an hourly wage published, the annual wage has been directly calculated from the reported survey data.

(3) The relative standard error (RSE) is a measure of the reliability of a survey statistic. The smaller the relative standard error, the more precise the estimate.

(4) Wages for some occupations that do not generally work year-round, full time, are reported either as hourly wages or annual salaries depending on how they are typically paid.

(5) This wage is equal to or greater than $100.00 per hour or $208,000 per year.

(8) Estimate not released.

Other OES estimates and related information:

May 2018 National Occupational Employment and Wage Estimates (cross-industry estimates)

May 2018 State Occupational Employment and Wage Estimates (cross-industry estimates)

May 2018 Metropolitan and Nonmetropolitan Area Occupational Employment and Wage Estimates (cross-industry estimates)

May 2018 National Industry-Specific Occupational Employment and Wage Estimates

May 2018 Occupation Profiles

Technical notes

Last Modified Date: April 2, 2019


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May 2018 National Industry-Specific Occupational Employment and Wage Estimates

NAICS 561200 - Facilities Support Services

These national industry-specific occupational employment and wage estimates are calculated with data collected from employers of all sizes, in metropolitan and nonmetropolitan areas in every state and the District of Columbia, in NAICS 561200 - Facilities Support Services.

Additional information, including the hourly and annual 10th, 25th, 75th, and 90th percentile wages, and the percent of establishments reporting the occupation, is available in the downloadable XLS files.

NAICS 561200 - Facilities Support Services is part of: NAICS 561000 - Administrative and Support Services.

Links to OES estimates for other industries

SOC Major Groups in NAICS 561200 - Facilities Support Services:

- 00-0000 All Occupations
- 11-0000 Management Occupations
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- 21-0000 Community and Social Service Occupations
- 23-0000 Legal Occupations
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- 37-0000 Building and Grounds Cleaning and Maintenance Occupations
- 39-0000 Personal Care and Service Occupations
- 41-0000 Sales and Related Occupations
- 43-0000 Office and Administrative Support Occupations
- 47-0000 Construction and Extraction Occupations
- 49-0000 Installation, Maintenance, and Repair Occupations
- 51-0000 Production Occupations
- 53-0000 Transportation and Material Moving Occupations

To sort this table by a different column, click on the column header

NAICS 561200 - Facilities Support Services

Display All records

Filter Table by Text: Text search table: 53-3032

Occupation code	Occupation title (click on the occupation title to view an occupational profile)	Group	Employment	Employment RSE	Percent of total employment	Median hourly wage	Mean hourly wage	Annual mean wage	Mean wage RSE
53-3032	Heavy and Tractor-Trailer Truck Drivers	detail	490	25.1%	0.32%	$21.74	$21.93	$45,620	3.3%

Showing 1 to 1 of 1 entries (filtered from 338 total entries)

About May 2018 National Industry-Specific Occupational Employment and Wage Estimates

(1) Estimates for detailed occupations do not sum to the totals because the totals include occupations not shown separately. Estimates do not include self-employed workers.

(2) Annual wages have been calculated by multiplying the hourly mean wage by a "year-round, full-time" hours figure of 2,080 hours; for those occupations where there is not an hourly wage published, the annual wage has been directly calculated from the reported survey data.

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(4) Wages for some occupations that do not generally work year-round, full time, are reported either as hourly wages or annual salaries depending on how they are typically paid.

(5) This wage is equal to or greater than $100.00 per hour or $208,000 per year.

(8) Estimate not released.

Other OES estimates and related information:

May 2018 National Occupational Employment and Wage Estimates (cross-industry estimates)

May 2018 State Occupational Employment and Wage Estimates (cross-industry estimates)

May 2018 Metropolitan and Nonmetropolitan Area Occupational Employment and Wage Estimates (cross-industry estimates)

May 2018 National Industry-Specific Occupational Employment and Wage Estimates

May 2018 Occupation Profiles

Technical notes

Last Modified Date: April 2, 2019

U.S. Bureau of Labor Statistics | Division of Occupational Employment Statistics, PSB Suite 2135, 2 Massachusetts Avenue, NE Washington, DC 20212-0001
www.bls.gov/OES | Telephone: 1-202-691-6569 | Contact OES

Date Prepared		I.D. Number
MARCH 2020	COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF WASTE MANAGEMENT	301071

BONDING WORKSHEET B
CAP AND FINAL COVER PLACEMENT

How do I start? Select a likely "worst case" scenario where you would have a maximum amount of the facility open and in need of closure. Provide a description of the scenario with references to site development stages.

My approved cap and final cover design consists of (top to bottom):

2 feet (min.) final cover soil

Drainage composite with 200-mil HDPE geonet drainage layer and 6 oz/sy nonwoven geotextile heat bonded to the upper side

40-mil HDPE or LLDPE geomembrane

6 oz/sy nonwoven geotextile cushion

6 inches of upper support zone material

1. Volume of fill required for area not at final/intermediate grade, but would require filling prior to capping: **Not Applicable** CY
2. Maximum area to be capped and covered (this should include all areas at final grade and not capped, intermediate grades and areas to be filled to get to intermediate grades then capped): **16** acres
3. Closure design, surveying and development of construction drawings (use $750.00/acre of number 2). $ **12,000**

   a. Construction and maintenance of access roads. $ **Not Applicable** LS

Material Volumes/Areas:

4. Earthen Materials

a.	Structural Fill	**Not Applicable** CY	(Specification[1])	
b.	Intermediate Cover	**Not Applicable** CY	(Specification[1])	
c.	Clay Cap Material	**Not Applicable** CY	(Specification[1])	
d.	Final Cover Soil	**52,195** CY	(Specification[1])	**6" Max/40% Pass #10 Sieve**
e.	Sand/Stone	**Not Applicable** CY	(Specification[1])	
f.	Other	**Not Applicable** CY	(Specification[1])	

5. Synthetic Materials

a.	Geotextile	**804,989** Sq.Ft.	(Type)	**6 oz/sy nonwoven**
b.	FML	**804,989** Sq.Ft.	(Type)	**40-mil HDPE/LLDPE**
c.	Drainage Layer	**804,989** Sq.Ft.	(Type)	**200-mil HDPE with 6 oz/sy GT**
d.	Other	**Not Applicable** Sq.Ft.	(Type)	**Not Applicable**

[1] *Provide a brief description of the material specification (i.e. ¾" minus, 12" minus – 12" lifts, etc.)*

6. Cap Penetrations: Estimate the number of cap penetrations that will need to be installed for closure of the facility including, but not limited to gas extraction wells, cleanouts, valve pits, etc. **Not Applicable**

Material Unit Costs:

7. Unit cost to place or regrade material to reach final grades (this may include additional waste placement to reach grade) **Not Applicable** $/CY

Are sufficient soils available in permitted on-site borrow areas to complete job? (Attach maps that identify sources and stockpiles) **Yes**

8. Earthen Materials	Stockpile	Borrow	Onsite	Offsite	Processing Req'd: Yes	Processing Req'd: No
a. Structural Fill	☐	☐	☐	☐	☐	☐
Unit cost to place[2] **Not Applicable** $/CY						
b. Intermediate Cover	☐	☐	☐	☐	☐	☐
Unit cost to place[2] **Not Applicable** $/CY						
c. Clay Cap Material	☐	☐	☐	☐	☐	☐
Unit cost to place[2] **Not Applicable** $/CY						
d. Final Cover Soil	☐	☒	☒	☐	☐	☒
Unit cost to place[2] **$3.70** $/CY						
e. Sand/Stone	☐	☐	☐	☐	☐	☐
Unit cost to place[2] **Not Applicable** $/CY						
f. Other	☐	☐	☐	☐	☐	☐
Unit cost to place[2] **Not Applicable** $/CY						

9. Synthetic Materials

a. Geotextile
Unit cost to place[3] **0.16** $/sq. ft.

b. FML
Unit cost to place[3] **0.42** $/sq. ft.

c. Drainage Layer
Unit cost to place[3] **0.58** $/sq. ft.

d. Other
Unit cost to place[3] **Not Applicable** $/sq. ft.

[2] *The unit costs should include all associated costs including, but not limited to cost of material, excavation, transportation, processing and placement.*

[3] *The unit price should include the material cost, transportation cost, handling cost and installation cost.*

10. Cap Penetration Unit Cost

    List the unit cost to fabricate and install each cap penetration

    Unit cost to place — Not Applicable $/each

11. Unit cost to construct E & S structures (i.e. channels, letdowns, etc.) — 1,303 $/acre

12. Revegetation Cost

    (Seeding rate used: See Attachments lbs/acre)

    (Lime rate used: See Attachments tons/acre)

    (Fertilizer rate used: See Attachments tons/acre)

    (Mulch rate used: See Attachments tons/acre)

    Unit cost to revegetate[3] — 3,263 $/acre

13. Cost Summary

a.	Fill (line 1 x line 7)		$ Not Applicable
b.	Construction Drawings (line 3)		$ 12,000
c.	Construction Roads (line 3a)		$ Not Applicable
d.	Structural Fill (line 4a x line 8a)		$ Not Applicable
e.	Intermediate Cover (line 4b x line 8b)		$ Not Applicable
f.	Clay Cap Material (line 4c x line 8c)		$ Not Applicable
g.	Final Cover (line 4d x line 8d)		$ 193,122
h.	Sand/Stone (line 4e x line 8e)		$ Not Applicable
i.	Other (line 4f x line 8f)		$ Not Applicable
j.	Geotextile (line 5a x line 9a)		$ 128,798
k.	FML (line 5b x line 9b)		$ 338,095
l.	Drainage Layer (line 5c x line 9c)		$ 466,894
m.	Other (line 5d x line 9d)		$ Not Applicable
n.	Penetrations (line 6 x line 10)		$ Not Applicable
o.	E & S Structures (line 2 x line 11)		$ 20,848
p.	Revegetation (line 12 x line 2)		$ 52,208
		Subtotal	$ 1,211,965
	CQA costs (use 5% of subtotal)		$ 60,598
		Total	$ 1,272,563

(Place this total on Summary Cost Worksheet – line 2)

CALCULATION BRIEF

BONDING WORKSHEET B
CAP AND FINAL COVER PLACEMENT

OBJECTIVE: **Determine the total bond amount required for cap and final cover placement during closure under worst case conditions.**

METHODOLOGY: Estimate material quantities and installation costs associated with cap and final cover placement at the MAX Environmental Technologies, Inc. – Yukon Facility, as required in Pennsylvania Department of Environmental Protection (DEP) Bonding Worksheet B.

REFERENCES:

1. RSMeans, CostWorks Version 16.03, 2019
2. Agru America 2017 Closure Estimate.
3. New Dominion Construction Inc. Bid, "Bid for MAX Environmental."
4. Hildenbrand Lime & Fertilizer Invoice, November 12, 2013.

ASSUMPTIONS:

1. The worst case scenario for closure assumes that the entire Landfill No. 6 area (approximately 16 acres) would require a geosynthetic cap and final cover soil installation at the time of premature closure.

2. The approved cap and final cover design will consist of (from top to bottom):

   - 2 feet (minimum) final cover soil;
   - Drainage composite with 200-mil high density polyethylene (HDPE) geonet drainage layer and 6-ounce per square yard (oz/sy) nonwoven geotextile heat bonded to the upper side;
   - 40-mil HDPE or linear low density polyethylene (LLDPE) geomembrane;

- 6-oz/sy nonwoven geotextile; and
- 6 inches of upper support zone material.

LINE ITEM ASSUMPTIONS AND CALCULATIONS:

1. It is assumed that placement of fill material will not be necessary in order to install the final cover system.

2. See Assumption No. 1 (16 acres).

3. The value for this line item is calculated as instructed on Worksheet B.

3a. Construction of new access roads or maintenance of existing roads will not be required at the time of closure.

4a. No structural fill placement is anticipated.

4b. Since the residual wastes disposed in Impoundment No. 6 meet the criteria for intermediate cover soil, placement of additional intermediate cover will not be required.

4c. No clay cap material is specified in the approved cap and final cover design described above.

4d. Final cover soil will be placed over the entire impoundment (16 acres), plus an additional 1.011 slope factor to account for the 15 percent impoundment slopes.

Final Cover Soil Volume = (16 ac) * (43,560 sf/ac) * (2 ft) * (1 cy/27 cf) * 1.011

Final Cover Soil Volume = 52,195 cy

4e. No stone material is specified in the approved cap and final cover design described above.

4f. No significant quantities of any other earthen material will be required to construct the approved cap and final cover system.

5. Synthetic material quantities were calculated for the entire 16-acre area to be closed in accordance with the approved cap and final cover system. An additional 10 percent was added to account for waste, and 1.05 slope factor to account for the 33 percent impoundment slopes.

Area = 16 ac * (43,560 sf/ac) * 1.05 * 1.10

Area = 804,989 sf

6. There are no anticipated cap penetrations.

7. Not Applicable (See Item 1).

8. The placement cost for final cover soil was estimated using the attached Reference Number (Ref. No.) 3 and assumes all soil will be supplied by the onsite borrow source. Per Ref. No. 3, the unit cost to load, haul, and place final cover soil is $3.70/cy [($9,540 + $175,500) / 50,000 cy). Based on previous experience, it is anticipated that the onsite soils will meet the grain size requirements (< 6 inches), and screening will not be required.

Final Cover Soil Placement = $3.70/cy

9. The synthetic material unit installation costs were taken from the attached closure cost estimates (Ref. No. 2) and adjusted for inflation. Per Ref. No. 2, the bare material unit costs are as follows:

Geotextile = $0.08/sf

Geomembrane = $0.27/sf

Drainage Composite = $0.43/sf

Per Ref. No. 2, the installation costs associated with the various geosynthetic components are as follows:

Geotextile Installation = $0.08/sf

Geomembrane Installation = $0.15/sf

Drainage Composite Installation = $0.15/sf

The total unit cost to install each geosynthetic component will include the individual costs for materials, and installation. These unit costs were determined as follows:

Total Geotextile Unit Cost = $0.08/sf + $0.08/sf

Total Geotextile Unit Cost = $0.16/sf

Total Geomembrane Unit Cost = $0.27/sf + $0.15/sf

Total Geomembrane Unit Cost = $0.42/sf

Total Drainage Composite Unit Cost = $0.43/sf + $0.15/sf

Total Drainage Composite Unit Cost = $0.58/sf

10. Not Applicable.

11. The unit cost ($/ac) for erosion and sedimentation (E&S) control structures has been estimated using Ref. No. 1, and assumes all E&S structures shown on Drawing Sheet 4 of the Permit Drawing Set remain to be constructed at the time of premature closure. These features include:

    - Perimeter Channel;
    - Culvert Nos. 1-7; and
    - Culvert 7 Outlet Protection.

    Since perimeter channel will be graded as part of the Impoundment No. 6 final grades, it is assumed that no additional excavation will be required to construct the channel. Additionally, the channel will be grass-lined. The perimeter channel will be constructed within the closure area, and revegetation costs for this area are included in the cost estimate for Line Item 12. Therefore, there will be no additional costs associated with vegetation of the grass-lined channel.

    Culverts 1 – 7 will be installed at the locations shown on Drawing Sheet 3 of the Permit Drawing Set. Assuming a typical pipe diameter of 15 inches, the unit cost to install the culverts will be $14.65 per linear foot (lf) (see attached MeansCostworks estimate). The culvert schedule is provided below.

Culvert No.	Length (ft)	Diameter (in)
1	60	15
2	170	15
3	230	15
4	190	15
5	180	15
6	120	15
7	300	15
TOTAL	1250	---

The cost to install the lengths of pipe indicated in the table above will be:

Culvert Installation Cost = $14.65/lf * 1,250 lf = $18,313

Additionally, approximately 260 lf of Culvert No. 7 will be installed within a trench measuring approximately 4 feet wide by 4 feet deep. The costs to excavate and backfill the trench will be $8.25/cy and $3.22/cy, respectively (see attached MeansCostworks estimate).

Culvert Trenching Cost = 4 ft * 4 ft * 260 ft * (1 cy / 27 cf) * ($8.25/cy + $3.22/cy) = $1,768

Outlet protection consisting of geotextile and riprap will be placed at the outlet of Culvert No. 7. It is assumed that the geotextile installation cost will be the same as the unit cost calculated in Line Item 9 ($0.16/sf = $1.44/sy). Approximately 10 cy of riprap will be required over an assumed area of 18 sy area (40 feet * 4 feet * 1sf / 9 sy). Using the riprap unit cost of $73.00/cy (see attached Means CostWorks estimate), the cost to install the outlet protection will be:

Outlet Protection Installation Cost = (10 cy * $73.00/cy) + (18 sy * $1.44/sy) = $756

Therefore, the total unit cost to install all E&S features during closure will be:

Total E&S Cost = $18,313 + $1,768 + $756 = $20,837

Total E&S Unit Cost = $20,837/ 16 ac = $1,303/ac

12. Revegetation costs were estimated using Ref. No. 4, which provides a 2013 cost incurred to revegetate an approximate 8-acre cap area (Impoundments Nos. 1, 2, and 3 Phase II Closure) at the Yukon Facility. Since the Landfill No. 6 closure area will be approximately double in size (16 acres), the cost provided in Ref. No. 4 was doubled and adjusted for inflation to determine the Landfill No. 6 revegetation cost .

Revegetation Cost = $11,088

However, aforementioned cost does not include mulching, as MAX has performed this in the past. A cost from RS Means Costworks for mulching was used [$59.00 per thousand square feet (M.S.F.)]. A per acre cost for mulching is then estimated as follows:

Mulching Cost = ($59.00 M.S.F./1,000 sf) * 43,560 sf/acre = $2,570/acre

Unit Revegetation Cost = ($11,088 / 16 acres) + $2,570 = $3,263/acre

13. The value for this line item is calculated as instructed on Worksheet B.

REFERENCE NO. 1

RS MEANS UNIT COSTS

MAX Environmental Technologies, Inc.
Landfill No. 6

RSMeans Costworks Unit Prices

Worksheet B

Description	Unit	Bare Material	Bare Labor	Bare Equipment	Bare Total	Total Incl. O&P
Public storm utility drainage piping, drainage and sewage, corrugated HDPE, type S, bell and spigot, with gaskets, 15" diameter, excludes excavation and backfill	L.F.	$8.45	$3.56	$0.00	$12.01	$14.65
Excavating, trench or continuous footing, common earth, 1/2 C.Y. excavator, 1' to 4' deep, excludes sheeting or dewatering	B.C.Y.	$0.00	$3.88	$2.20	$6.08	$8.25
Excavating, trench backfill, 1 C.Y. bucket, minimal haul, front end loader, wheel mounted, excludes dewatering	L.C.Y.	$0.00	$1.52	$0.84	$2.36	$3.22
Rip-rap and rock lining, random, broken stone, machine placed for slope protection	L.C.Y.	$32.50	$12.80	$16.60	$61.90	$73.00

REFERENCE NO. 2

NEW DOMINION CONSTRUCTION INC. BID

	New Dominion Construction Inc.					
Job #	**Bid for MAX Environmental**					
Phase	Description	Item #	Quantity	Unit	Unit Bid	Item Total Bid
1000	Mobilize	1	1	ls	$9,540.00	$9,540.00
1001	Load, Haul and Place on Cap 24"	2	50,000	cy	$3.51	$175,500.00
1002	Excavate and Stockpile	3	25,000	cy	$1.74	$43,500.00
1003		4	1		$0.00	$0.00
1004		5	1		$0.00	$0.00
1005		6	1		$0.00	$0.00
1006		7	1		$0.00	$0.00
1007		8	1		$0.00	$0.00
1008		9	1		$0.00	$0.00
1009		10	1		$0.00	$0.00
1010		11	1		$0.00	$0.00
	Project Total					**$228,540.00**

REFERENCE NO. 3

AGRU AMERICA 2017 CLOSURE ESTIMATE ADJUSTED FOR INFLATION

August 11, 2017

Mr. David V. Spang
Civil & Environmental Consultants, Inc.
4000 Triangle Lane, Suite 200
Export, PA 15632

RE: Hopkins County Landfill Closure – Budget Pricing
White Plains, Kentucky

Dear Mr. Spang,

As requested, below is the budget pricing for the geosynthetics required for the above referenced closure project. Additionally, Agru has provided budget pricing for a Value Engineering alternate using MicroDrain Integrated Drainage System (IDS) geomembrane. MicroDrain replaces the geocomposite drainage layer, improves performance, and reduces cost.

Conventional Option - HDPE

Description	Quantity (SF)	Material ($/SF)	Installation ($/SF)	Total
40 mil HDPE MicroSpike	2,314,720	$ 0.252	$ 0.14	$ 907,370.24
6/270/6	2,309,850	$ 0.414	$ 0.14	$ 1,279,656.90
				$ 2,187,027.14

Conventional Option - LLDPE

Description	Quantity (SF)	Material ($/SF)	Installation ($/SF)	Total
40 mil LLDPE MicroSpike	2,314,720	$ 0.258	$ 0.14	$ 920,332.67
6/270/6	2,309,850	$ 0.414	$ 0.14	$ 1,279,656.90
				$ 2,199,989.57

Agru Integrated Drainage System (IDS) Geomembrane

Description	Quantity (SF)	Material ($/SF)	Installation ($/SF)	Total
50 mil LLDPE MicroDrain	2,311,500	$ 0.532	$ 0.16	$ 1,600,598.18
Agrutex 081 Nonwoven	2,313,000	$ 0.081	$ 0.08	$ 371,236.50
				$ 1,971,834.68

*Budgetary material pricing includes estimated freight to the jobsite. General Contractor markup not included.

Estimated savings with Agru MicroDrain is approximately $228,000 or $4,300 per acre.

500 Garrison Road, Georgetown, SC 29440 • 843 546-0600 • 800 321-1379 • Fax 843 546-0516

With more than 150,000,000 square feet installed to date, Agru's Integrated Drainage System (IDS) geomembranes are a proven alternative to conventional geocomposite drainage systems. For closure applications, the drainage studs are installed facing up and covered with a nonwoven geotextile to provide the required filtration. MicroDrain geomembrane is produced using the highest grade polyethylene resins on state-of-the-art flat cast manufacturing equipment. The flat cast machined rollers provide the final structured surface with a 130 mil studded drain surface on the top side and 20 mil asperity texturing on the bottom side.

Below are comparisons between conventional geomembrane and Agru MicroDrain:

Geomembrane Properties Comparison

Property	GRI GM 17	MicroDrain VE Alternate	% Exceeds Specification
Thickness (mil)	40	50	25%
Break Strength (lb/in)	60	105	75%
Break Elongation (%)	250	300	20%
Tear Resistance (lb)	22	30	36%
Puncture Resistance (lb)	44	55	25%

The supporting documentation referenced below has been enclosed for your convenience:

1. Agru MicroDrain Product Data Sheet
2. Agru Agrutex 081 Product Data Sheet
3. Agru Engineering Bulletin 2015-01 Transmissivity
4. Agru Engineering Bulletin 2015-03 Static Slope Stability
5. Third-party Transmissivity Test Report

Agru America's Integrated Drainage System (IDS) geomembrane has previously been approved by closure applications. Upon your request Agru will work with the project team to coordinate site specific material as required. Please call me at (502) 797-9301 if you have any questions or require additional information.

Sincerely,

Michael Gnau, P.E.
Agru America

MAX Environmental Technologies, Inc.
Landfill No. 6
Inflation Adjusted Geosynthetic Prices
Worksheet B

Product	2017 Costs		2019 Costs (Inflation Adjusted)	
	Material ($/ft^2)	Installation ($/ft^2)	Material ($/ft^2)	Installation ($/ft^2)
40 mil HDPE MicroSpike	0.252	0.14	0.263	0.146
40 mil LLDPE MicroSpike	0.258	0.14	0.269	0.146
6 oz/sy Double Sided Geocomposite	0.414	0.14	0.432	0.146
Agrutex 081 Nonwoven	0.081	0.08	0.084	0.083

Year	Avg. Inflation Rate[1]
2018	2.4%
2019[2]	1.8%

Notes:
1. Annual average inflate rate based on published values.
2. 2019 inflation rate estimated as the average of published monthly inflation rates to date (January through May).

REFERENCE NO. 4

HILDENBRAND LIME AND FERTILIZER INVOICE ADJUSTED FOR INFLATION

[illegible]ENBRAND LIME & FERTILIZER
346 WALTZ MILL RD.
RUFFSDALE PENNSYLVANIA 15679

(724) 446-5802 FAX (724) 446-2508

INVOICE

69860

TO Mix Environmental

DATE	ORDER NO.
11/19/13	

SHIP TO: Yukon

SALESPERSON	DATE SHIPPED	SHIPPED VIA	F.O.B. POINT	TERMS
	Add 3% for	Charge or	Farm Plan	

QUANTITY	DESCRIPTION		UNIT PRICE	TOTAL
> 2465	18-46-0 50-140-140	N		1108 40
	46-0-0 8.1 Acres	P		
1890	0-0-60.5 397# Special seed mix	K	7.50	2840 52
	0-46-0 Based on Pure Live seed			
	Borate 8 Bu. Rye seed - cover crop		19.00	152 00
	Guaranteed Analysis			
9 %	Total Nitrogen	Trailer Rental		
26 %	Available Phosphoric Acid Spread	Delivery Charge		300 00
26 %	Soluble Potash	Sales Tax		
537	Net Weight 4355 Rate Per Acre	Total		4402 92

Thank You!

BRAND LIME & FERTILIZER
348 WALTZ MILL RD.
RUFFSDALE, PENNSYLVANIA 15679

(724) 446-7902 FAX (724) 446-2538

INVOICE

69861

DATE	ORDER NO.
11/19/13	
SHIP TO	
Yukon	
2 Acres	

TO Max Environmental

SALESPERSON | DATE SHIPPED | SHIPPED VIA | F.O.B. POINT | TERMS

Add 3% for Charge or Farm Plan

QUANTITY		DESCRIPTION		UNIT PRICE		TOTAL	
> 348	18-46-0	Custom Blend / No Filler	N				
151	46-0-0	600# 19-19-19	P	550	00	165	00
190	0-0-60.5	5.50# Contractors Mix	K	60	00	300	00
	0-46-0	2 Bu. Rye Seed		19	00	32	00
	Borate						
	Guaranteed Analysis						
14 %	Total Nitrogen		Trailer Rental				
19 %	Available Phosphoric Acid	Spread	Delivery Charge			75	00
19 %	Soluble Potash		Sales Tax				
579	Net Weight	794 Rate Per Acre	Total			578	00

Thank You!

MAX Environmental Technologies, Inc.
Landfill No. 6
Inflation Adjusted Revegetation Cost
Worksheet B

Item	2013 Costs	2019 Costs (Inflation Adjusted)
Revegetation Cost	$9,962.000	$11,087.236

Year	Avg. Inflation Rate[1]
2013	1.5%
2014	1.6%
2015	0.1%
2016	1.3%
2017	2.1%
2018	2.4%
2019[2]	1.8%

Notes:
1. Annual average inflate rate based on published values.
2. 2019 inflation rate estimated as the average of published monthly inflation rates to date (January

Date Prepared		I.D. Number
MARCH 2020	COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF WASTE MANAGEMENT	301071

BONDING WORKSHEET C
GROUNDWATER MONITORING SYSTEM

1.	Number of wells in the approved monitoring plan.		26
	a. Shallowest well depth	35 ft.	
	b. Deepest well depth	170 ft.	
	c. Average well depth	104 ft.	
	d. Number with dedicated pumps	3	
2.	Unit cost to upgrade an existing well with a dedicated pump		1,050 $/well
3.	Unit cost to install a well (assume average well depth, and include drilling, installation, developing and pump installation)		6,814 $/well
4.	Number of wells to be installed (wells in the approved plan that haven't been installed)		Not Applicable
5.	Number of wells to be replaced over the life of the monitoring period (use 10% of line 1 and round up)		3
6.	Number of pumps to be replaced/repaired (use 25% of line 1 over the monitoring period)		6
7.	Unit cost to purge and sample a well (assume average well depth, and include methane monitoring, record keeping and shipping)		98 $/well
8.	Unit cost to analyze sample(s)		
	a. Quarterly (25 PA Code §273.284, §277.284 or §288.254)		120 $/well
	b. Annually (25 PA Code §273.284, §277.284 or §288.254)		211 $/well
9.	Unit cost to analyze data (includes review of lab QA/QC data, database input, form completion, statistical analysis and data review)		49 $/well
10.	Cost to purge, sample and analyze – quarterly (line 7 + line 8a + line 9)		267 $/well
11.	Cost to purge, sample and analyze – annually (line 7 + line 8b + line 9)		358 $/well
12.	Number of years of sampling (30 + time to close)		31 years

13. Cost Summary –Groundwater Monitoring System

a.	System upgrade ([line 1 – line 1d] x line 2)	$ 24,150
b.	Wells to be Installed (line 3 x line 4)	$ Not Applicable
c.	Wells to be replaced (line 3 x line 5)	$ 20,442
d.	Pumps to be replaced (line 2 x line 6)	$ 6,300
e.	Cost of Quarterly Monitoring **(line 1 x "3" x line 10 x line 12)**	$ 645,606
f.	Cost of Annual Monitoring (line 1 x line 11 x line 12)	$ 288,548
	Subtotal	$ 985,046

Adjustment for resampling, assessments, etc.

a.	Use 0% of subtotal if no assessments in last 2 yrs.	
b.	Use 5% of subtotal if assessment in last 2 yrs.	
c.	Use 10% if currently in assessment, abatement or increase monitoring **(Currently increased monitoring)**	$ 98,505

Total $ 1,083,551

(Place this total on Summary Cost Worksheet – line 3)

CALCULATION BRIEF
BONDING WORKSHEET C
GROUNDWATER MONITORING SYSTEM

OBJECTIVE: **Determine the total bond amount required for the groundwater monitoring system during closure.**

METHODOLOGY: Estimate installation, maintenance, and sampling costs associated with the groundwater monitoring system at the MAX Environmental Technologies, Inc. – Yukon Facility, as required in Pennsylvania Department of Environmental Protection (DEP) Bonding Worksheet C.

REFERENCES:

1. RSMeans, CostWorks Version 16.03, 2019
2. Cribbs & Associates, Inc. Invoices, February 8, 2014, April 19, 2014, and July 13, 2014.
3. Cribbs & Associates, Inc. "MAX Environmental Technologies Yukon Facility Ground Water Monitoring Analytical Program," Revised 2013.
4. Analytical Testing Costs provided by Geochemical Testing, June 2019.

LINE ITEM ASSUMPTIONS AND CALCULATIONS

1. There are 26 groundwater wells in the approved monitoring plan, 3 of which currently have dedicated pumps. The monitoring wells included in the approved groundwater monitoring plan include:
   - RC -1
   - RC-2
   - RC-5
   - RC-6A
   - W-2
   - W-8
   - PC-1
   - PC-2
   - PC-3
   - PC-5
   - PC-7
   - PC-8
   - PC-9
   - PW-1
   - PW-2
   - PW-3
   - W-4
   - W-5
   - W-6
   - W-9
   - W-10
   - W-11
   - W-12
   - W-13
   - SP-2
   - SP-3
2. The average monitoring well depth at the Yukon Facility is approximately 104 feet (ft). Per Reference Number (Ref. No.) 1, the unit cost to install a new pump within a monitoring well to a depth of approximately 100 ft is $1,050 per well.

3. The well installation cost assumes the average well depth of 104 ft. It is also assumed 4 hours will be required for well development, at a unit rate of $23.94 per hour based on the Bureau of Labor Statistics rates for an Environmental Engineering Technician to develop the well. The unit cost for installing the well will be $54.50 per linear foot (lf) (see attached Means CostWorks Estimate). The following estimate includes drilling, installation, development, and pump installation.

   Cost Per Well = (104 LF * $54.50/LF) + (4 hrs * $23.94/hr) + $1,050 /Well

   = $6,814/well

4. All groundwater monitoring wells will have been installed at the time of this bonding calculation.

5. The value for this line item is calculated as instructed in Worksheet C.

6. The value for this line item is calculated as instructed in Worksheet C.

7. The cost to purge and sample a well was based on the average of the quarterly sampling costs provided in Ref. No. 2 and adjusted for inflation. The unit cost to sample a well is determined as follows:

   Cost to Sample = ($2,549.03 / 26 wells) = $98/Well

8. Laboratory analysis costs for the quarterly groundwater samples were determined from Ref. No. 3 and Ref. No. 4. Ref. No. 3 summarizes the approved analytical program for the Yukon Facility's 26 ground water monitoring wells. Ref. No 4. summarizes the unit costs provided by a local laboratory for the Yukon Facility's analytical testing requirements and provides an average cost for the quarterly groundwater analysis cost. Note that the field blank has been included with the estimated cost per well. Quarterly analysis cost per well was determined as follows:

   Quarterly Groundwater Analysis Cost = $3,096.25 / 26 wells = $120/well

   Similar to the quarterly ground water analysis cost, the information from Cribbs & Associates, Inc. in Ref. No. 3 and the unit costs from Ref. No. 4 are used to estimate the Yukon Facility's additional annual groundwater analysis cost (cost in addition to the quarterly analysis cost).

   Additional Annual Groundwater Analysis Cost = $ 2,357.00 / 26 wells = $91/well

   Total Annual Analysis Cost per Well = $ 120/well + $ 91/well = $211/well

9. The data analysis cost was based on current CEC rates. The calculation assumes one-half hour per well to review, enter, and analyze the data. Form completion is included in the laboratory analysis cost.

   Data Analysis Cost = 0.5 hr/well * ($97/hr) = $49/well

10. The value for this line item is calculated as instructed in Worksheet C.

11. The value for this line item is calculated as instructed in Worksheet C.

12. The number of years of sampling assumes that the closure of the Yukon Facility will require one year, and that 30 years of post-closure remain, for a total of 31 years.

13. The value for this line item is calculated as instructed in Worksheet C.

REFERENCE NO. 1

RS MEANS UNIT COSTS

MAX Environmental Technologies, Inc.
Landfill No. 6

RSMeans Costworks Unit Prices

Worksheet C

Description	Unit	Bare Material	Bare Labor	Bare Equipment	Bare Total	Total Incl. O&P
Public water supply wells, wells domestic water, pumps, 1/2 HP, 4" submersible, installed in wells to 100 ft. deep	Ea.	$585.00	$274.00	$0.00	$859.00	$1,050.00
Public water supply wells, observation wells, 1-1/4" riser pipe	V.L.F.	$17.35	$9.85	$18.55	$45.75	$54.50

REFERENCE NO. 2

CRIBBS & ASSOCIATES, INC. INVOICES ADJUSTED FOR INFLATION

CRIBBS & Associates, Inc. P.O. Box 44
Delmont, PA 15626

Invoice

Date	Invoice #
7/13/2014	2014-066

Bill To
Ms. Sharon Simon MAX Environmental Technologies 1815 Washington Road Pittsburgh, Pennsylvania 15241-1423

Project
Yukon Groundwater

Date	Description	Qty	Rate	Amount
4/15/2014	Shawn Austad - Max April Monthly Sampling and 2nd Qtr 2014 Sampling	8	40.00	320.00
5/19/2014	Dustin Brant - Quarterly and Monthly Sampling	8	40.00	320.00
5/20/2014	Tyler Vatter - Quarterly and Monthly Sampling	7	40.00	280.00
6/17/2014	Dustin Brant - Collect groundwater samples	8	40.00	320.00
6/17/2014	Tyler Vatter - 2nd quarter sampling	8	40.00	320.00
6/18/2014	Dustin Brant - Collect groundwater samples	8	40.00	320.00
6/18/2014	Tyler Vatter - 2nd quarter sampling	8	40.00	320.00
4/15/2014	Sample Ice	1.1	4.59	5.05
6/13/2014	Fittings for hose repair at W-6	1.1	8.72	9.59
6/17/2014	sample Ice	1.1	4.59	5.05
	5 trips @ 42 miles	210	0.50	105.00
	Total Reimbursable Expenses			124.69

DATE POSTED JUL 15 2014
GLC
G/L ACCT. 99000-028
INVOICE APPROVED [signature] 7/17/14
VENDOR NO. CRIB10

Total	$2,324.69
Payments/Credits	$0.00
Balance Due	$2,324.69

MAX Environmental Technologies, Inc.
Landfill No. 6
Inflation Adjusted Well Sampling Prices
Worksheet C

Item	2014 Costs	2019 Costs (Inflation Adjusted)
Cribb's Quarterly Sampling Cost	2324.69	2549.03

Year	Avg. Inflation Rate[1]
2014	1.6%
2015	0.1%
2016	1.3%
2017	2.1%
2018	2.4%
2019[2]	1.8%

Notes:
1. Annual average inflate rate based on published values.
2. 2019 inflation rate estimated as the average of published monthly inflation rates to date (January

REFERENCE NO. 3

SPREADSHEET SUMMARY OF MONITORING REQUIREMENTS

MAX Environmental - Yukon Facility
Quarterly Private Well Analyte Summary

	Well	Chloride	Nitrate-Nitrogen	Total Organic Carbon	Total Organic Halogens	Total Dissolved Solids	pH	Specific Conductance	VOC	BTEX
1	Reinstadler	1	1	1	1	1	1	1	1	1
2	Gardner (Jones)	1	1	1	1	1	1	1	1	1
3	Kiselich	1	1	1	1	1	1	1	1	1
Totals		**3**	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**3**

REFERENCE NO. 4

SPREADSHEETS ANALYTICAL TESTING COSTS

MAX Environmental - Yukon Facility
Private Water Well Analytical Cost Summary

	Unit Prices		Quarterly Surface Water Cost
Item	Geochemical	Quarterly Private Well Qty	Geochemical
Chloride	$6.00	3	$18.00
Nitrate-Nitrogen	$12.00	3	$36.00
Total Organic Carbon	$15.00	3	$45.00
Total Organic Halogens	$60.00	3	$180.00
Total Dissolved Solids	$9.00	3	$27.00
pH	$5.00	3	$15.00
Specific Conductance	$7.00	3	$21.00
Volatile Organics Analysis	$72.00	3	$216.00
BTEX	$50.00	3	$0.00
Total Costs			**$558.00**

Spang, David

From: Nate R. Bergstresser <nbergstresser@geo-ces.com>
Sent: Thursday, June 20, 2019 3:09 PM
To: Spang, David
Subject: FW: 170-822 Groundwater Sampling Unit Cost

David,
Please see below pricing. If you need anything further, please let me know.
Thanks,

Nate Bergstresser
Client Support

Geochemical Testing
2005 North Center Avenue
Somerset, PA 15501

P: 814-443-1671
F: 814-445-6729
C: 814-279-5001

From: Elwood L. Kennell
Sent: Thursday, June 20, 2019 3:08 PM
To: Nate R. Bergstresser
Subject: RE: 170-822 Groundwater Sampling Unit Cost

Total Alkalinity	$9.00
Bicarbonate (requires pH & Alkalinity)	$0.00
Chloride	$9.00
Fluoride	$9.00
Nitrate-Nitrogen	$12.00
Sulfate	$9.00
Ammonia-Nitrogen	$10.00
Chemical Oxygen Demand	$15.00
Turbidity	$10.00
Total Organic Carbon	$15.00
Total Organic Halogens	$60.00
Total Dissolved Solids	$9.00
Total Cyanide	$25.00
pH	$5.00
Specific Conductance	$7.00
VOC	$72.00
Phenolics	$14.00
Volatile Organics Analysis	$72.00
Naphthalene	$50.00
BTEX	$50.00
TPH (DRO)	$60.00
TPH (GRO)	$50.00
Dissolved Metals (As, Ba, Cd, Cr, Fe, Pb, Na)	$35.50

Dissolved Metals (Ca, Fe, Mn, K, Na)	$20.00
Dissolved Metals (As, Ba, Cd, Ca, Cr, Fe, Pb, Mn, K, Na)	$49.00
Dissolved Metals Filtering (if needed)	$17.00
Bottle Set Preparation (per sample)	$15.00

From: Nate R. Bergstresser
Sent: Thursday, June 20, 2019 2:34 PM
To: Elwood L. Kennell
Subject: FW: 170-822 Groundwater Sampling Unit Cost

Woody,
Please see below quote request.
Thanks,

Nate Bergstresser
Client Support

Geochemical Testing
2005 North Center Avenue
Somerset, PA 15501

P: 814-443-1671
F: 814-445-6729
C: 814-279-5001

From: Spang, David [mailto:dspang@cecinc.com]
Sent: Thursday, June 20, 2019 2:32 PM
To: Nate R. Bergstresser
Subject: 170-822 Groundwater Sampling Unit Cost

Hi Nate,

I work at CEC and your information was passed along to me by Tom Antonacci. We have a client who needs to provide the DEP with unit costs for the sampling requirements of their groundwater monitoring plan. I've pulled together a summary of the sampling requirements in the table below. Are you able to provide unit costs for each test? This is a bit of an emergency and we need to get a response to the DEP quickly. Please let me know if you have any questions. I greatly appreciate any assistance you can provide regarding this matter.

Total Alkalinity
Bicarbonate
Chloride
Fluoride
Nitrate-Nitrogen
Sulfate
Ammonia-Nitrogen
Chemical Oxygen Demand
Turbidity
Total Organic Carbon
Total Organic Halogens

Total Dissolved Solids
Total Cyanide
pH
Specific Conductance
VOC
Phenolics
Volatile Organics Analysis
Naphthalene
BTEX
TPH (DRO)
TPH (GRO)
Dissolved Metals (As, Ba, Cd, Cr, Fe, Pb, Na)
Dissolved Metals (Ca, Fe, Mn, K, Na)
Dissolved Metals (As, Ba, Cd, Ca, Cr, Fe, Pb, Mn, K, Na)

Thanks,

David V. Spang, P.E. / Assistant Project Manager
Civil & Environmental Consultants, Inc.
4000 Triangle Lane · Suite 200 · Export, PA 15632
Toll-Free: (800) 899-3610 · Direct: (724) 387-6337 · Fax: (724) 327-5280
Mobile: (724) 317-7484 · http://www.cecinc.com
Senior Leadership · Integrated Services · Personal Business Relationships

Date Prepared	COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF WASTE MANAGEMENT	I.D. Number
MARCH 2020		301071

BONDING WORKSHEET D
SURFACE WATER MONITORING

Solid Waste Surface Water Sampling

1.	Number of surface points monitored for Solid Waste Permit	21	
2.	Unit cost to sample a surface point (record keeping and shipping)	20.52	$/point
3.	Unit cost to analyze sample(s)		
	a. Quarterly (25 PA Code §273.284 or §288.254)	N/A	$/point
	b. Annually (25 PA Code §273.284 or §288.254)	62.50	$/point
4.	Unit cost to analyze data (includes review of lab QA/QC data, database input, form completion, and data review)	84.00	$/point
5.	Cost to sample and analyze – quarterly (line 2 + line 3a + line 4)	N/A	$/point
6.	Cost to sample and analyze – annually (line 2 + line 3b + line 4)	167.02	$/point
7.	Number of years of sampling (30 + time to close)	31	years

NPDES Surface Discharge Sampling

8.	Number of outfalls monitored	Not Applicable	
9.	Monitoring frequency (i.e. monthly, quarterly, etc)	Not Applicable	
10.	Number of samples to be taken per point/year	Not Applicable	
11.	Unit cost to sample a surface point (record keeping and shipping)	Not Applicable	$/point
12.	Unit cost to analyze sample(s) (including data review and completing DMR)	Not Applicable	$/point
13.	Number of years of sampling (30 + time to close)	Not Applicable	years
14.	Cost Summary –Surface Water Monitoring		
	a. Cost of Quarterly Surface Water Monitoring **(line 1 x "3" x line 5 x line 7)**	$ N/A	
	(Quarterly costs were not developed; Refer to Bonding Worksheet C Calculation brief for explanation)		
	b. Cost of Annual Surface Water Monitoring (line 1 x line 6 x line 7)	$ 108,730	
	c. Cost of NPDES Monitoring (line 8 x line 10 x [line 11 + line 12] x line 13)	$ Not Applicable	
	d. NPDES renewals over post-closure period (includes application development, fees, etc.) use 10% of line 14c	$ Not Applicable	
	Subtotal$	**$** 108,730	

Adjustment for resampling, assessments, etc.

a. Use 0% of subtotal if no assessments in last 2 yrs. **(No assessments in the last 2 years)**

b. Use 5% of subtotal if assessment in last 2 yrs.

c. Use 10% if in assessment, abatement or increased monitoring $\$$ 0

Total $\$$ 108,730

(Place this total on Summary Cost Worksheet – line 4)

CALCULATION BRIEF
BONDING WORKSHEET D
SURFACE WATER MONITORING

OBJECTIVE: **Determine the total bond amount required for surface water monitoring.**

METHODOLOGY: Estimate sampling costs associated with surface water monitoring at the MAX Environmental Technologies, Inc. – Yukon Facility, as required in Pennsylvania Department of Environmental Protection (DEP) Bonding Worksheet D.

REFERENCES:

1. Analytical Testing Costs provided by Geochemical Testing, June 2019. (Included with Worksheet C.)
2. Bureau of Labor Statistics; June 2019 National Industry-Specific Occupational Employment and Wage Estimates.

LINE ITEM ASSUMPTIONS AND CALCULATIONS

1. The Yukon Facility currently monitors twenty-one (21) surface water points.
2. The unit cost assumes one (1) technician for one-half (1/2) hour on Bureau of Labor Statistics rate for an Environmental Engineering Technician ($23.94/hr).

Cost to Sample = 1 Technician * (1/2 hour * $23.94/hr)

= $11.97 / point

The surface water sampling points included in MAX's approved SWMP have varying sampling requirements with frequencies ranging from annually, semi-annually, quarterly, and monthly for the 21 surface water monitoring points. Based on MAX's Site Wide Monitoring and Report Plan, the total number of samples to be collected is 36 per year. Therefore, the average annual cost to sample per surface point was determined as follows:

$$\text{Annual Cost to Sample per Surface Point} = \frac{\text{Cost to Sample} \times \text{No. of Samples}}{\text{Sampling points}}$$

$$\text{Annual Cost to Sample per Surface Point} = \frac{\$11.97 \times 36}{21} = \$20.52$$

3. Based on past analytical costs for MAX's surface water monitoring points, MAX anticipates a quarterly cost of $391.50. Therefore, the average quarterly analytical cost per surface water monitoring point is calculated as follows:

$$\text{Average Quarterly Analytical Cost Per Surface Water Monitoring Point} = \frac{\$391.50}{21} = \$18.64/\text{Well}$$

Similar to the quarterly surface water analysis cost, the past analytical costs were used to estimate the Yukon Facility's additional annual surface water analysis cost (cost in addition to the quarterly analysis cost). MAX anticipates an additional annual cost of $963.

$$\text{Additional Annual Analytical Cost Per Surface Water Monitoring Point} = \frac{\$963}{21} = \$45.86/\text{Well}$$

$$\text{Total Annual Cost Per Surface Water Monitoring Point} = \$16.64/\text{Well} + \$45.86/\text{Well} = 62.50/\textit{Well}$$

4. The data analysis cost is based on current CEC rates. The calculation assumes one-half hour per point to review, enter, and analyze the data. Form completion is included in the laboratory analysis cost.

Data Analysis Cost = 0.5 hr/point * ($97/hr) = $49 / point

The typical data analysis cost determined above, along with the total number of samples to be collected was used to determine an average annual cost per monitoring point for the surface water monitoring:

$$\text{Annual Cost to Analyze Data per Surface Monitoring Point} = \frac{49 \times 36}{21} = \$84.00$$

5. Based on the above methodology, quarterly costs were not developed.

6. The value for this line item is calculated as instructed in Worksheet D.

7. The number of years of sampling assumes that the closure of the Yukon Facility will require one (1) year, and that 30 years of post-closure remain, for a total of 31 years.

8 - 13. Items 8 through 13 address cost associated with maintaining the NPDES permit at the site. However, these costs have been included in Line Item 6 on Bonding Worksheet I. Therefore, it has not been included here.

14a. The value for this line item is calculated as instructed in Worksheet D.

14b. The value for this line item is calculated as instructed in Worksheet D.

14c. The value for this line item is calculated as instructed in Worksheet D.

14d. The value for this line item is calculated as instructed in Worksheet D.

REFERENCE NO. 2

BUREAU OF LABOR STATISTICS; JUNE 2019 NATIONAL INDUSTRY-SPECIFIC OCCUPATIONAL EMPLOYMENT AND WAGE ESTIMATES

Occupational Employment Statistics

BROWSE OES
OES HOME
OES OVERVIEW
OES NEWS RELEASES
OES DATA
OES CHARTS
OES MAPS
OES PUBLICATIONS
OES DATABASES
OES FAQS
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OES TOPICS
RESPONDENTS
DOCUMENTATION
SPECIAL NOTICES
RELATED LINKS

May 2018 National Industry-Specific Occupational Employment and Wage Estimates

NAICS 561200 - Facilities Support Services

These national industry-specific occupational employment and wage estimates are calculated with data collected from employers of all sizes, in metropolitan and nonmetropolitan areas in every state and the District of Columbia, in NAICS 561200 - Facilities Support Services.

Additional information, including the hourly and annual 10th, 25th, 75th, and 90th percentile wages, and the percent of establishments reporting the occupation, is available in the downloadable XLS files.

NAICS 561200 - Facilities Support Services is part of: NAICS 561000 - Administrative and Support Services.

Links to OES estimates for other industries

SOC Major Groups in NAICS 561200 - Facilities Support Services:

- 00-0000 All Occupations
- 11-0000 Management Occupations
- 13-0000 Business and Financial Operations Occupations
- 15-0000 Computer and Mathematical Occupations
- 17-0000 Architecture and Engineering Occupations
- 19-0000 Life, Physical, and Social Science Occupations
- 21-0000 Community and Social Service Occupations
- 23-0000 Legal Occupations
- 25-0000 Education, Training, and Library Occupations
- 27-0000 Arts, Design, Entertainment, Sports, and Media Occupations
- 29-0000 Healthcare Practitioners and Technical Occupations
- 31-0000 Healthcare Support Occupations
- 33-0000 Protective Service Occupations
- 35-0000 Food Preparation and Serving Related Occupations
- 37-0000 Building and Grounds Cleaning and Maintenance Occupations
- 39-0000 Personal Care and Service Occupations
- 41-0000 Sales and Related Occupations
- 43-0000 Office and Administrative Support Occupations
- 47-0000 Construction and Extraction Occupations
- 49-0000 Installation, Maintenance, and Repair Occupations
- 51-0000 Production Occupations
- 53-0000 Transportation and Material Moving Occupations

To sort this table by a different column, click on the column header

NAICS 561200 - Facilities Support Services

Display All records

Filter Table by Text: Text search table: 17-3022

Occupation code	Occupation title (click on the occupation title to view an occupational profile)	Group	Employment	Employment RSE	Percent of total employment	Median hourly wage	Mean hourly wage	Annual mean wage	Mean wage RSE
17-3022	Civil Engineering Technicians	detail	250	30.3%	0.16%	$22.74	$23.94	$49,800	4.0%

Showing 1 to 1 of 1 entries (filtered from 338 total entries)

About May 2018 National Industry-Specific Occupational Employment and Wage Estimates

(1) Estimates for detailed occupations do not sum to the totals because the totals include occupations not shown separately. Estimates do not include self-employed workers.

(2) Annual wages have been calculated by multiplying the hourly mean wage by a "year-round, full-time" hours figure of 2,080 hours; for those occupations where there is not an hourly wage published, the annual wage has been directly calculated from the reported survey data.

(3) The relative standard error (RSE) is a measure of the reliability of a survey statistic. The smaller the relative standard error, the more precise the estimate.

(4) Wages for some occupations that do not generally work year-round, full time, are reported either as hourly wages or annual salaries depending on how they are typically paid.

(5) This wage is equal to or greater than $100.00 per hour or $208,000 per year.

(8) Estimate not released.

Other OES estimates and related information:

May 2018 National Occupational Employment and Wage Estimates (cross-industry estimates)

May 2018 State Occupational Employment and Wage Estimates (cross-industry estimates)

May 2018 Metropolitan and Nonmetropolitan Area Occupational Employment and Wage Estimates (cross-industry estimates)

May 2018 National Industry-Specific Occupational Employment and Wage Estimates

May 2018 Occupation Profiles

Technical notes

Last Modified Date: April 2, 2019

U.S. Bureau of Labor Statistics | Division of Occupational Employment Statistics, PSB Suite 2135, 2 Massachusetts Avenue, NE Washington, DC 20212-0001
www.bls.gov/OES | Telephone: 1-202-691-6569 | Contact OES

Date Prepared

MARCH 2020

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

I.D. Number

301071

BONDING WORKSHEET E
PRIVATE WATER SUPPLY MONITORING

1. Number of private water supplies monitored. 3

2. Unit cost to sample a well (include methane monitoring, record keeping and shipping) 98 $/well

3. Unit cost to analyze sample(s) quarterly (Act 101 Section 1103) 186 $/well

4. Unit cost to analyze data (includes review of lab QA/QC data, database input, form completion, and data review) 49 $/well

5. Total cost for quarterly sampling (line 2 + line 3 + line 4) 333 $/well

6. Number of years of sampling (30 + time to close) 31 years

7. Cost Summary –Private Water Supply Monitoring

   a. Cost of quarterly monitoring (Line 1 x line 5 x 4 x line 6) $ 123,876

Total $ 123,876

(Place this total on Summary Cost Worksheet – line 5)

CALCULATION BRIEF
BONDING WORKSHEET E
PRIVATE WATER SUPPLY MONITORING

OBJECTIVE: **Determine the total bond amount required for private water supply monitoring.**

METHODOLOGY: Estimate sampling and analysis costs associated with private water supply monitoring at the MAX Environmental Technologies, Inc. – Yukon Facility, as required in Pennsylvania Department of Environmental Protection (DEP) Bonding Worksheet E.

REFERENCES:

1. Cribbs & Associates, Inc. "MAX Environmental Technologies Yukon Facility Ground Water Monitoring Analytical Program," Revised 2013. (Included with Worksheet C.)

LINE ITEM ASSUMPTIONS AND CALCULATIONS

1. The number of surface water monitoring points was obtained from Reference No. 1. The Yukon Facility currently monitors three (3) private water supply wells, including the following:

   - Reinstadtler;
   - Keslich; and
   - Gardner.

2. The unit cost to sample a private water well is assumed to be the same as the cost used in Worksheet C, Item 7 ($98/well).

3. The quarterly analysis cost for a private water well was calculated as follows:

$$\textbf{Average Quarterly Analytical Cost per Private Well} = \frac{\textbf{Average Quarterly Analytical Cost}}{\textbf{No. of Sampling Ponts}}$$

$$\textbf{Average Quarterly Analytical Cost per Private Well} = \frac{\$558.00}{3} = \$186$$

4. The unit cost to analyze the data for a private water well is assumed to be the same as the cost used in Worksheet C, Item 9 ($49).

5. The value for this line item was calculated as instructed in Worksheet E.

6. The number of years of sampling assumes that the closure of the Yukon Facility will require one (1) year, and that 30 years of post-closure remain, for a total of 31 years.

7. The value for this line item was calculated as instructed in Worksheet

Date Prepared		I.D. Number
MARCH 2020	COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF WASTE MANAGEMENT	301071

BONDING WORKSHEET F
GAS MONITORING SYSTEM

1. Number of probes in the approved monitoring plan. Not Applicable
   a. Shallowest probe depth Not Applicable ft.
   b. Deepest probe depth Not Applicable ft.
   c. Average probe depth Not Applicable ft.
   d. Number of probes installed Not Applicable
2. Unit cost to install a probe (including, drilling, and installation) Not Applicable $/probe
3. Number of probes to be installed (probes in the approved plan that haven't been installed Not Applicable
4. Number of probes to be replaced over the life of the monitoring period (use 5% of line 1 and round up) Not Applicable
5. Unit cost to monitor a probe (include record keeping) Not Applicable $/probe
6. Number of probes and structure monitoring events per year
7. Number of years of monitoring (30 + time to close) Not Applicable years
8. Cost Summary –Gas Monitoring System
   a. System completion (line 3 x line 2) $ $ Not Applicable
   b. Probe replacement (line 2 x line 4) $ $ Not Applicable
   c. Probe Monitoring (line 1 x line 5 x line 6 x line 7) $ Not Applicable

Subtotal $ Not Applicable

Adjustment for resampling, assessments, etc.

a. Use 0% of subtotal if no assessments in last 2 yrs.
b. Use 5% of subtotal if assessment in last 2 yrs.
c. Use 10% if in assessment or increased monitoring

Total $ Not Applicable
(Place this total on Summary Cost Worksheet – line 6)

CALCULATION BRIEF
BONDING WORKSHEET F
GAS MONITORING SYSTEM

OBJECTIVE: **Determine the total bond amount required for the gas monitoring system.**

METHODOLOGY: Estimate sampling, analysis, and maintenance costs associated with gas monitoring system as required in DEP Bonding Worksheet F.

LINE ITEM ASSUMPTIONS AND CALCULATIONS

1. Landfill No. 6 at MAX Environmental Technologies, Inc. Yukon Facility is not subject to gas monitoring. Therefore, this worksheet is not applicable.

Date Prepared

MARCH 2020

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

I.D. Number

301071

BONDING WORKSHEET G
GAS COLLECTION SYSTEM

1. Number of wells in the approved monitoring plan. Not Applicable
   a. Shallowest well depth Not Applicable ft.
   b. Deepest well depth Not Applicable ft.
   c. Average well depth Not Applicable ft.
   d. Number of wells installed Not Applicable
   e. Number of pumping wells Not Applicable
2. Cost for flare or other control device installation $ Not Applicable LS
3. Unit cost to install a well (including, drilling, installation, and connection to active system) Not Applicable $/well
4. Unit cost to install a gas well requiring liquid removal (including, drilling, installation, and connection to active system) Not Applicable $/well
5. Number of wells to be installed (wells in the approved plan that haven't been installed)
6. Number of gas wells requiring liquid removal to be installed Not Applicable
7. Estimate the length of collection piping to be installed Not Applicable LF
8. Unit cost to install collection piping (include excavation, pipe bedding, pipe, backfilling, regrading, revegetating, surveying and QA/QC) Not Applicable $/LF
9. Number of wells to be replaced/repaired over the life of the monitoring period (use 10% of line 1 and round up) Not Applicable
10. Unit cost to monitor well and balance system monthly (include monitoring of methane, oxygen, carbon dioxide or nitrogen, temperature, pressure, and NSPS record keeping) Not Applicable $/well
11. Unit cost to conduct surface monitoring (NSPS) Not Applicable $/event
12. Control System Information Not Applicable
    a. number and size of blowers Not Applicable
    b. flare dimensions and capacity Not Applicable
    c. current flow rate Not Applicable
    d. other features Not Applicable
13. Cost of electricity to run system Not Applicable $/year
14. Cost to maintain system (including daily check, weekly charts, maintenance, etc.) Not Applicable $/year
15. Cost of annual blower maintenance (including greasing, bearing check and alignment) Not Applicable $/year

16. Cost of stack testing (once per five years) Not Applicable $/event
17. Estimate the volume of condensate generated per year Not Applicable gallons
18. Cost of condensate management (including pumping, testing and treatment/disposal) Not Applicable $/year
19. Number of years to run system (30 + time to close) Not Applicable years
20. Cost Summary –Gas Collection System Not Applicable

System Installation

a. Additional well installation (line 5 x line 3) $ Not Applicable

b. Additional pumping well installation (line 4 x line 6) $ Not Applicable

c. Cost of collection piping (line 7 x line 8) $ Not Applicable

d. Well replacement (line 3 x line 9) $ Not Applicable

e. Enclosed ground flare system (line 2) $ Not Applicable

System Installation Subtotal $ Not Applicable
(sum lines a to e)

f. Cost of monitoring/balancing (line 1 x "12" x line 10 x line 19) $ Not Applicable

g. Cost of surface monitoring (line 11 x "1.5" x line 19) $ Not Applicable

h. Electric Cost (line 13 x line 19) $ Not Applicable

i. System maintenance cost (line 14 x line 19) $ Not Applicable

j. Blower maintenance cost (line 15 x line 19) $ Not Applicable

k. Stack testing cost (line 16 x [line 19/5]) $ Not Applicable

l. Condensate management cost (line 18 x line 19) $ Not Applicable

System Monitoring and Maintenance Subtotal $ Not Applicable
(sum lines f to l)

Adjustment for miscellaneous maintenance items (including; knockout pot maintenance, thermocouple replacement, flame detector replacement, flame arrester maintenance, flare maintenance, enrichment/startup gas replacement, pneumatic valve maintenance, sump maintenance, panel board maintenance, etc.)

a. Use 0% of subtotal if system[1] < 2yrs old

b. Use 5% of subtotal if system[1] is > 2 yrs old, but < 5yrs old

c. Use 10% if system[1] is > 5 yrs old

$ Not Applicable

Total (Installation subtotal + M & M subtotal + Misc. Maintenance) $ Not Applicable
(Place this total on Summary Cost Worksheet – line 7)

[1] *The age of the system would be considered from the date that the active system went on-line. Expansions of the systems are assumed to occur, however, this does not change the age of the system unless a majority of the existing system is replaced/upgraded.*

CALCULATION BRIEF
BONDING WORKSHEET G
GAS COLLECTION SYSTEM

OBJECTIVE: **Determine the total bond amount required for the gas collection system.**

METHODOLOGY: Estimate sampling, analysis, and maintenance costs associated with the gas collection system as required in DEP Bonding Worksheet G.

LINE ITEM ASSUMPTIONS AND CALCULATIONS

1. Landfill No. 6 at MAX Environmental Technologies, Inc. Yukon Facility is not subject to a gas collection system. Therefore, this worksheet is not applicable.

Date Prepared

MARCH 2020

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

I.D. Number

301071

BONDING WORKSHEET H
OTHER MONITORING AND REPORTING

Please list the annual costs to maintain the following permits/registrations that apply. Additional space is provided for items applicable to your facility, but not listed.

1. Title V or other air permit (include the annual permit fee, cost to complete emissions inventory and emissions fees) $ Not Applicable
2. NSPS Annual Report preparation cost $ Not Applicable
3. Local permit or Host Agreement requirements $ Not Applicable
4. UST/AST registration $ Not Applicable
5. Other _____ $ Not Applicable
6. Other _____ $ Not Applicable
7. Other _____ $ Not Applicable
8. Other _____ $ Not Applicable
9. Other _____ $ Not Applicable
10. Number of years of monitoring/maintenance (30 + time to close) Not Applicable years

Total (sum of lines 1 to 9 x line 10) $ Not Applicable

(Place this total on Summary Cost Worksheet – line 8)

CALCULATION BRIEF
BONDING WORKSHEET H
OTHER MONITORING AND REPORTING

OBJECTIVE: **Determine the total bond amount required for other monitoring and reporting.**

METHODOLOGY: Estimate general monitoring, reporting, and permit/registration costs as required in DEP Bonding Worksheet H.

LINE ITEM ASSUMPTIONS AND CALCULATIONS

1. Landfill No. 6 at MAX Environmental Technologies, Inc. Yukon Facility is not subject to any air permitting, local permitting, host agreements, or UST/AST registrations. Therefore, this worksheet is not applicable.

Date Prepared	COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF WASTE MANAGEMENT	I.D. Number
MARCH 2020		301071

BONDING WORKSHEET I
LEACHATE MANAGEMENT

Leachate Management System Narrative: Provide a detailed description of the leachate management system. You need to include all features of the system including but not limited to landfill sumps (with number and size of pumps and controllers), length of conveyance system, number and type of storage facilities, and treatment/disposal method. A schematic should be attached as back up.

1. Number of years of leachate management (30 years + closure period) — 31 years
2. Annual leachate volume generated — 842,173 gallons
3. Annual cost to manage leachate volume (include pump and pipe maintenance, electricity and monitoring)[1] — $ 5,244

Discharge to POTW

4. Unit cost to discharge leachate to a POTW — Not Applicable $/gal

On-site Treatment (including pretreatment)

5. Unit cost for treatment of leachate (include equipment maintenance, electricity, personnel, chemicals, sludge disposal, etc.) — 0.00617 $/gal
6. Annual cost to maintain NPDES permit (include sampling, analysis, report preparation, and factor in five year renewal application preparation and fees) — $ 11,603

Interim Trucking of Leachate

7. Unit cost to transport and dispose of leachate — Not Applicable $/gal
8. NPDES Permit (cost to prepare application, fees and sampling/analysis) — $ Not Applicable
9. Cost to construct on-site treatment or pretreatment system or connection to POTW — $ Not Applicable
10. Unit cost for treatment of leachate (include equipment maintenance, electricity, personnel, chemicals, etc.) — Not Applicable $/gal
11. Annual cost to maintain NPDES permit (include sampling, analysis, report preparation, and factor in five year renewal application preparation and fees) — $ Not Applicable

[1] *Does not include storage of leachate which is contained on Worksheet K*

12. Cost Summary:

a. Cost to manage/convey leachate (line 1 x line 3) $ — $ 162,564

If discharge to POTW

b. Discharge to POTW cost (line 1 x line 2 x line 4) — $ Not Applicable

If have on-site treatment

c. Treatment cost (line 1 x line 2 x line 5) — $ 161,082

d. NPDES maintenance cost (line 1 x line 6) — $ 359,693

If you currently truck leachate

e. Cost of trucking leachate for three years (line 2 x "3" x line 7) — $ Not Applicable

f. NPDES permit (line 8) — $ Not Applicable

g. Cost to construct on-site treatment system or connection to POTW (line 9) — $ Not Applicable

h. Treatment cost ([line 1 – "3"] x line 2 x line 10) — $ Not Applicable

i. NPDES maintenance cost ([line 1 – "3"] x line 11) — $ Not Applicable

If you currently store leachate in impoundments

j. Size of pond(s) — Not Applicable acres

k. Estimate volume of material to be removed (including liner system and minimum of 12" of soil) — Not Applicable CY

l. Unit cost to dispose of materials (Worksheet A, line 4) — Not Applicable $/CY

m. Cost to dispose of materials (line k x line l) — $ Not Applicable

n. Volume of structural backfill — Not Applicable CY

o. Cost for backfill (line n x Worksheet B, line 8a) — $ Not Applicable

p. Revegetation cost — $ Not Applicable LS

Subtotal — $ 683,339

(sum of a – i) +m+o+p)

Adjustment for maintenance, equipment replacement and contingencies, etc. Please note that these are cumulative and you must add all of the percentages that apply to arrive at the final adjustment percentage. The minimum adjustment is 10%.

a. Add 10% of subtotal if pumps are used to convey leachate. **(Pumps are used to convey leachate)**

b. Add 5 % of subtotal if flow volume to POTW is restricted.

c. Add 10% of subtotal if leachate is stored in ponds

d. Add 10% of subtotal if onsite treatment **(Leachate is treated onsite))**

e. Add 15% if trucking leachate

f. Add 10% if current leachate generation exceeds 5MG/year

Final adjustment factor: 20 %

g. Adjustment (subtotal x factor) — $ 136,668

Total (subtotal + adjustment) — $ 820,007

(Place this total on Summary Cost Worksheet – line 9)

CALCULATION BRIEF
BONDING WORKSHEET I
LEACHATE MANAGEMENT

OBJECTIVE: **Determine the total bond amount required for leachate management.**

METHODOLOGY: Estimate leachate management costs as required in Pennsylvania Department of Environmental Protection (DEP) Bonding Worksheet I.

REFERENCES:

1. RSMeans, CostWorks Version 16.03, 2019
2. Pump Data Sheet; Gorman-Rupp Pumps, Pump Size 83B-B-2.
3. Electric Rates; "www.PAPowerswitch.com."
4. MAX Environmental Technologies, Inc. – Yukon Plant; Operational Data.
5. Spreadsheet Summary of NPDES Monitoring Requirements based on Reference No. 6, prepared by Civil & Environmental Consultants, Inc., June 2019.
6. NPDES Permit No. PA0027715.
7. Analytical Testing Costs provided by Geochemical Testing, June 2019.
8. Bureau of Labor Statistics; June 2019 National Industry-Specific Occupational Employment and Wage Estimates.

LINE ITEM ASSUMPTIONS AND CALCULATIONS

1. The number of years of sampling assumes that the closure of the landfill will require one year, and that 30 years of post-closure remain, for a total of 31 years.
2. MAX assumes annual leachate volume generation of 842,173 gallons based on previous site operations.
3. Annual cost estimates to manage leachate volumes include pipe maintenance and pumping costs.

Pump Replacement

Assume that on average each of the four operating pumps associated with Impoundment No. 6 will need replaced every 5 years. Pumps associated with Landfill No. 6 include the following:

- Leachate Collection Side-Slope Submersible Pump;
- Pump Station No. 6;
- Pump Associated with the new Leachate Storage Tank; and
- Pump Station No. 4.

Assume that one pump will need replaced every 5 years. The approximate cost per pump is $5,750 (see attached Means Costworks Unit Price). Therefore, the annual cost for pump replacement is $1,150.

Pump Replacement = (4 pumps x $5,750 per pump) / 5 years = $4,600 per year

Pumping Cost

The average annual leachate volume during the 31-year post-closure period is approximately 842,173 gallons of leachate per year. Based on the maximum head requirements from Pump Station No. 4 to the leachate treatment facility (≈70 feet) and an assumed flow rate of 200 (gallons per minute), a 9 horsepower (hp) pump is required. A pump data sheet for a typical pump meeting these requirements is provided at the end of these calculations [Reference Number (Ref. No.) 2]. The current cost of electricity at the Yukon facility is $0.0562/kwh, based on the current electric rates for West Penn Power (Ref. No. 3). All four pumps covered under this line item have been conservatively assumed to be 9 hp pumps. In reality, lesser hp would be required. Therefore, the annual pumping cost is determined as follows:

Annual Pumping Hours = [(842,173 gal/yr)/200 gpm] x 1 hr/60 min = 70 hr/yr

Annual Power Use = 70 hr/yr x 9 hp x 4 pumps = 2,520 hp-hr/yr

Using a conversion factor of 1 hp = 0.7457 kilowatts

Annual Power Use = 2,520 hp-hr/yr x (0.7457 kw/1 hp) = 1,880 kwh/yr

Annual Pump Cost = 1,880 kwh/yr x $0.0562/kwh ≈ $106/yr

Pipe Maintenance

It is assumed that over the 31-year post-closure period, the entire force main line will need to be cleaned at least once. A typical cost for a PIG pipe cleaning was taken from Means Costworks as $4.14 per linear foot. The Yukon Facility utilizes one leachate transmission line (2,277 ft) that extends from Landfill No. 6 to the leachate storage tank and two leachate force mains between the leachate storage and treatment tanks and Pump House No. 4. and the leachate treatment building (1,800 ft.).

= (2,227 ft + 1,800 ft.) x ($4.14/ft)

= $16,672

Pipe Maintenance = $16,672 / 31 years

Pipe Maintenance = $538/year

Monitoring Costs

No monitoring cost associated with the leachate management system is anticipated.

Total Annual Leachate Management Cost

= $4,600 + $106 + $538

= $5,244

4. Not applicable, leachate will be treated onsite.

5. Based on current MAX operational data, the wastewater treatment plant (WWTP) uses 50 Watts per hour (W/hr) and is operated continuously throughout the year. Therefore, the electricity usage is calculated as follows:

Electricity Usage = 8,760 hrs/year x 50 W/hr = 438,000 W/year = 438 kW/year

Additionally, current electricity rates are included in Ref. No. 3. Using these rates, the annual cost of electricity is as follows:

Annual Electricity Cost = 438 kW/year x 0.0562/kW = $24.62

Based on operational history, 0.0001 pounds of sulfuric acid and 0.0001 of lime is used to treat 1-gallon of leachate. Assuming an average of 842,173 gallons of leachate is generated per year (Line Item 2), approximately 84 pounds of sulfuric acid and lime are used annually based on the above dosing rates. Therefore, annual electricity and chemical cost were determined as follows:

Item	Annual Quantity	Unit Cost	Total
Electricity	438 kwh/year	$0.0562/kw	$24.62
Sulfuric Acid	84 lb	$0.132/lb	$11.09
Lime	84 lb	$0.048/lb	$4.03
		Total	39.74
		Total/842,173 gal =	$0.00005/gal

Additionally, the cost of sludge disposal and labor was estimated using CEC Experience, RS Means CostWorks, and MAX's operational data.

Sludge Disposal Costs:

MAX currently generates sludge with a unit weight of approximately 90 pcf at a rate of approximately 5 tons per month (tpm). Based on leachate modeling contained in Exhibit 17R-1.3, MAX's leachate generation rate during active operations prior to Phase 1 Closure will be about 13,500,000 gallons per year. Therefore, based on leachate generation estimates in post-closure of 842,173 gallons per year, MAX's post-closure sludge generation will reduce from 5 tpm to less than 0.5 tpm based on straight-line interpolation. Therefore, a 0.5 tpm sludge generation rate was assumed throughout the life of the post-closure life of Landfill No. 6. Sludge disposal costs are estimated assuming sludge is hauled to an off-site municipal waste landfill for 31 years. A typical hauling fee of $17.70/cy was taken from RS Means Costworks assuming one 12 cy truck delivers the sludge to a nearby facility (within 30 miles). A typical disposal fee of $50.00/ton was also selected based on CEC experience. The unit cost for sludge disposal was estimated as follows:

Total Weight of Sludge = (0.5 ton/month x 372months) = 186 tons

Total Volume of Sludge = (186 tons x 2000 lbs/ton) x (1/90 pcf) x (1 cf /27 cy) = 153 cy

Total Annual Sludge Hauling Fee = (153 cy x $17.70/cy)/31 years = $88/year

Total Annual Sludge Disposal Fee = (186 tons x $50.00/ton)/31 years = $300/year

Sludge Disposal Unit Cost = ($88 + $300)/ 842,173 gallons = $0.00046/gallon

Labor Costs

Current MAX operational data indicates that 30 labor hours per month are required to operate the on-site treatment plant. MAX anticipates these labor hours will decrease as the sludge generation volume decreases. As such, the labor cost for the treatment plant was estimated using 30 hours for 5 years and 15 hours for the remaining 26 years based on Bureau of Labor Statistics rate for a Waste Water Treatment Plant Operator ($22.79/hr). The unit cost for labor was then estimated as follows:

Total Labor Hours = (30 hours/month x 60 months) + (15 hours/month x 312 months) = 6,480 hours

Total Annual Labor Cost = (6,480 hours x $22.79/hour)/31 years = $4,764

Labor Unit Cost = $4,764/842,173 gallons = 0.00566/gallon

Total Annual Leachate Treatment Cost

= $0.00005 +$0.00046+ $0.00566 = $0.00617/gallon

6. Based on experience, CEC anticipates that the following cost are associated with maintaining the existing NPDES permit at the site:

   Sampling cost was determined similar to the methodology presented in Worksheet D. Based on the sites NPDES permit (Ref. No. 6), MAX has 9 outfalls, including:

   - 001;
   - 002;
   - 003;
   - 004;
   - 005;
   - 006;
   - 007;
   - 101; and
   - 201

   However, Outfall 006 is maintained as part of the surface water monitoring program. Costs for these outfalls have been included in Worksheet D. Additionally, Outfalls 002, 003, 004, and 005 are only sampled during overflow events. To date, there have been no overflow events and these points have not been sampled. Outfall 101 is a hazardous waste outfall and should not be included in this bond.

Outfall 201 was proposed, but was never constructed. Therefore, only cost associated with sampling Outfalls 001 and 007 have been included.

For NPDES sampling costs, it was assumed that one (1) technician will be required for one-half (1/2) hour for each outfall based on Bureau of Labor Statistics rate for an Environmental Engineering Technician ($23.94/hr).

Cost to Sample = 1 Technician * (1/2 hour * $23.94/hr) = $11.97/point

Outfall 001 is sampled weekly and Outfall 007 is sampled twice monthly. Therefore there are 24 weeks where both outfalls are sampled together and 28 weeks where only Outfall 001 is sampled. Therefore, the annual sampling cost is determined as follows:

Annual Sampling Cost for Outfall 001 and 007 = 24 trips x 2 points x $11.97/point = $575 /year

Annual Sampling Cost for Outfall 001 = 28 trips x $11.97/point = $336/year

Total Annual Sampling Cost for Outfall 001 and 007 = $575/year + $336/year = $911 /year

Analysis costs are presented in Ref. No. 5 and are summarized as follows:

Annual Analysis Costs = $6,708/ year for two outfalls

NPDES Discharge Monitoring Report (DMR) costs were estimated assuming 2 hours for a staff consultant (current CEC rates = $97/hr) and one-half hour for a project manager (current CEC rates = $126/hr) for a total report preparation cost as follows:

DMR Preparation Costs = $257/DMR report for all three outfalls

Therefore, the annual DMR preparation costs are as follows:

Annual DMR Preparation Costs = $3,084/year

Additionally, the permit renewal application preparation was estimated at $3,000 (based on CEC experience) and will be required every 5 years. Therefore, the annualized permit renewal preparation cost is as follows:

Annual Permit Renewal Preparation = $3,000 / 5 years = $600/year

Finally, the permit renewal application fee is $1,500 and will be required every 5 years. Therefore, the annualized permit renewal application fee is as follows:

Annual Permit Renewal Fee = $1,500 / 5 years = $300/year

Therefore, the total cost to maintain the NPDES permit is as follows:

Total NPDES Permit Maintenance Cost = $911 + $6,708 + $3,084 + $600 + $300

Total NPDES Permit Maintenance Cost = $11,603/year

7. Not applicable, leachate will be treated onsite.
8. Not applicable, leachate will be treated onsite.
9. Not applicable, leachate will be treated onsite.
10. Not applicable, leachate will be treated onsite.
11. Not applicable, leachate will be treated onsite.
12. Calculated as instructed in Worksheet I.

REFERENCE NO. 1

MEANS COSTWORKS DATA

MAX Environmental Technologies, Inc.
Landfill No. 6

RSMeans Costworks Unit Prices

Worksheet I

Description	Unit	Bare Material	Bare Labor	Bare Equipment	Bare Total	Total Incl. O&P
Pump, pedestal sump, single stage, 200 GPM, 3 H.P., 3" discharge	Ea.	$4,200.00	$760.00	$0.00	$4,960.00	$5,750.00
Sewer pipelines, cleaning, pig method, lengths 1000' to 10,000', 4" diameter through 24" diameter, minimum	L.F.	$0.00	$0.00	$0.00	$3.60	$4.14
Cycle hauling (wait, load, travel, unload or dump, and return) time per cycle, excavated or borrow, loose cubic yards, 20 min load/wait/unload,12 cubic yards. Truck, cycle, 30 miles, 35 mph, excludes loading equipment.	L.C.Y.	$0.00	$5.25	$8.95	$14.20	$17.70

REFERENCE NO. 2

PUMP INFORMATION

Pump Data Sheet - Gorman-Rupp SEW 50Hz

Company: MAX
Name: Imp. 6
Date: 9/30/2014

GORMAN-RUPP PUMPS

Pump:

Size: 83B-B-2

Type: 80-SERIES
Synch speed: Adjustable

Speed: 2840 rpm
Dia: 6.88 in

Curve: 83B-B-2

Impeller: 7422B

Specific Speeds:

Ns: ---
Nss: ---

Dimensions:

Suction: 3 in
Discharge: 3 in

Pump Limits:

Temperature: ---
Pressure: ---
Sphere size: 0.81 in

Power: ---
Eye area: ---

Search Criteria:

Flow: 200 US gpm

Head: 110 ft

Fluid:

Water
SG: 1
Viscosity: 1.105 cP

Temperature: 60 °F
Vapor pressure: 0.2563 psi a
Atm pressure: 14.7 psi a

NPSHa: ---

Motor:

Standard: NEMA
Enclosure: TEFC

Speed: ---
Frame: ---

Sizing criteria: Max Power on Design Curve

---- Data Point ----

Flow:	200 US gpm
Head:	110 ft
Eff:	65%
Power:	8.58 hp
NPSHr:	7.05 ft

---- Design Curve ----

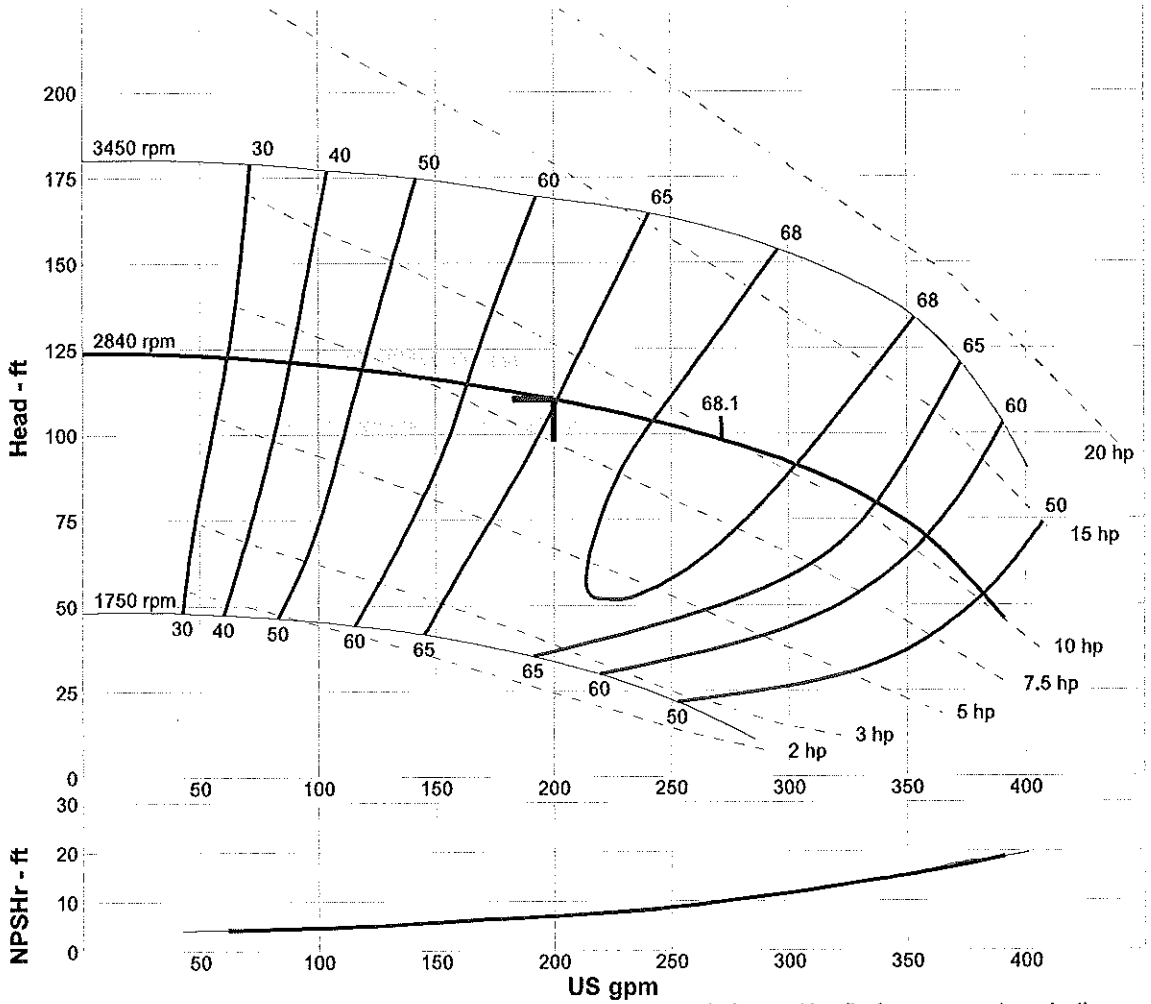
Shutoff head:	124 ft
Shutoff dP:	53.7 psi
Min flow:	---

BEP: 68% @ 271 US gpm

NOL power:
10.5 hp @ 358 US gpm

-- Max Curve --

Max power:
17.6 hp @ 353 US gpm



This curve is provided for preliminary selection only. Please consult factory before making final pump or motor selections.

Performance Evaluation:

Flow US gpm	Speed rpm	Head ft	Efficiency %	Power hp	NPSHr ft
240	2840	104	68	9.3	8.3
200	2840	110	65	8.58	7.05
160	2840	115	59	7.82	6.12
120	2840	119	50	7.15	5.07
80	2840	122	37	6.61	4.5

Selected from catalog: gorman-rupp engineered systems pumps.50 Vers: 1.32

REFERENCE NO. 3

YUKON ELECTRIC RATES

PAPowerSwitch

Pennsylvania Public Utility Commission

The Official Electric Shopping Website of the Pennsylvania Public Utility Commission

Past Prices **Current Price** Future Price

Default Service: West Penn Power

Price to Compare:
$0.055350
per kWh

Current Charge:
$66.42
Estimated per Month

Rate Schedule: GS-20 General Service Schedule 20

Achieve Energy Solutions LLC 717-790-9005	$0.0562 per kWh	$67.44 Estimated per Month

Learn More About This Offer

Our prices include Gross Receipt Tax (GRT) and do not have any hidden cost or enrollment fees. Visit us at www.AESLLC.com or call our Pricing Desk at 717-790-9005 for more information about our low fixed rates. Please note that seasonal businesses and religious organizations are subject to review.

Achieve Energy Solutions LLC 717-790-9005	$0.0557 per kWh	$66.84 Estimated per Month

REFERENCE NO. 5

SPREADSHEET SUMMARY OF NPDES MONITORING REQUIREMENTS

MAX Environmental - Yukon Facility
NPDES Monitoring Point Summary

	Well	Total Suspended Solids	Oil & Grease	Total Residual Chlorine	Hexavalent Chromium	CBOD (5-Day)	Fecal coliform Organisms	Nitrate-Nitrogen	pH	Dissolved Metals (As, Ba, Cd, Cr, Fe, Pb, Na)
1	001	1/W	1/W	1/W	2/M			1/W		2/M
2	007	2/M		2/M		2/M	2/M		2/M	
Totals Analytical Tests		76	52	76	24	24	24	52	24	24
Geochemical Test Cost		$9.00	$30.00	$15.00	$15.00	$17.00	$40.00	$12.00	$5.00	$35.50
Total Cost		$684.00	$1,560.00	$1,140.00	$360.00	$408.00	$960.00	$624.00	$120.00	$852.00
Overall Total		**$6,708**								

Notes:

1. "1/W" denotes one sample per week
2. "2/M" two samples per month
3. Per NPDES Permit No. PA0027715

REFERENCE NO. 6

NPDES PERMIT NO. PA0027715

Pennsylvania Department of Environmental Protection

400 Waterfront Drive
Pittsburgh, PA 15222-4745
JUL 28 2004
Southwest Regional Office

412-442-4000
Fax 412-442-4328

CERTIFIED MAIL NO. 7000 1670 0005 1020 6250

Henry A. Springer, Jr., P.E.
MAX Environmental Technologies, Inc.
1815 Washington Road
Pittsburgh, PA 15241

Re: Industrial Waste
Yukon Facility
NPDES Permit No. PA0027715
APS I.D. No. 495757
South Huntingdon Township
Westmoreland County

Dear Mr. Springer:

Your permit is enclosed. Review it carefully, with special attention to the effluent limitations, monitoring requirements, and other requirements in Part C of the permit.

A Discharge Monitoring Report (DMR) and Supplemental Reporting Forms are included. The master DMR will be prepared and distributed by the U.S. Environmental Protection Agency (EPA) in the near future. Use the enclosed DMR Form until you receive a master from EPA. The reporting forms must be submitted to the Department and the EPA Regional Office as instructed in the permit and the enclosed Instruction Sheet.

A copy of an original "Discharge Monitoring Report - Supplemental Sewage Sludge Report" is enclosed. You should make a supply of copies for future use. Please follow the instructions and submit copies of the completed form (2 sided), as an attachment to the DMR, to each of the addresses listed in Part C of the permit, but not EPA.

Any person aggrieved by this action may appeal, pursuant to Section 4 of the Environmental Hearing Board Act, 35 P.S. Section 7514, and the Administrative Agency Law, 2 Pa. C.S. Chapter 5A, to the Environmental Hearing Board, Second Floor, Rachel Carson State Office Building, 400 Market Street, PO Box 8457, Harrisburg, PA 17105-8457, 717-787-3483. TDD users may contact the Board through the Pennsylvania Relay Service, 800-654-5984. Appeals must be filed with the Environmental Hearing Board within 30 days of receipt of written notice of this action unless the appropriate statute provides a different time period. Copies of the appeal form and the Board's rules of practice and procedure may be obtained from the Board. The appeal form and the Board's rules of practice and

procedure are also available in braille or on audiotape from the Secretary to the Board at 717-787-3483. This paragraph does not, in and of itself, create any right of appeal beyond that permitted by applicable statutes and decisional law.

IF YOU WANT TO CHALLENGE THIS ACTION, YOUR APPEAL MUST REACH THE BOARD WITHIN 30 DAYS. YOU DO NOT NEED A LAWYER TO FILE AN APPEAL WITH THE BOARD.

IMPORTANT LEGAL RIGHTS ARE AT STAKE, HOWEVER, SO YOU SHOULD SHOW THIS DOCUMENT TO A LAWYER AT ONCE. IF YOU CANNOT AFFORD A LAWYER, YOU MAY QUALIFY FOR FREE PRO BONO REPRESENTATION. CALL THE SECRETARY TO THE BOARD (717-787-3483) FOR MORE INFORMATION.

If you have any questions, please call me at 412-442-4031.

Sincerely,

James M. Vanek, P.E.
Sanitary Engineer
Water Management

Enclosures

cc: U.S. Environmental Protection Agency

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
WATER MANAGEMENT PROGRAM

AUTHORIZATION TO DISCHARGE UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

NPDES PERMIT NO. PA0027715

In compliance with the provisions of the Clean Water Act, 33 U.S.C. Section 1251 et seq. (the "Act") and Pennsylvania's Clean Streams Law, as amended, 35 P.S. Section 691.1 et seq.,

MAX Environmental Technologies, Inc.
1815 Washington Road
Pittsburgh, PA 15241-1498

is authorized to discharge from a facility located at

Yukon Facility
South Huntingdon Township
Westmoreland County

to receiving waters named Sewickley Creek and Unnamed Tributary to Sewickley Creek

in accordance with effluent limitations, monitoring requirements and other conditions set forth in Parts A, B, and C hereof.

THIS PERMIT SHALL EXPIRE AT MIDNIGHT, JUL 31 200[illegible].

The authority granted by this permit is subject to the following further qualifications:

1. If there is a conflict between the application, its supporting documents and/or amendments and the terms and conditions of this permit, the terms and conditions shall apply.

2. Failure to comply with the terms, conditions, or effluent limitations of this permit is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal.

3. Complete application for renewal of this permit, or notification of intent to cease discharging by the expiration date, must be submitted to the Department at least 180 days prior to the expiration date (unless permission has been granted by the Department for submission at a later date), using the appropriate NPDES permit application form.

   In the event that a timely and complete application for renewal has been submitted and the Department is unable, through no fault of the permittee, to reissue the permit before the expiration date, the terms and conditions of this permit, including submission of the Discharge Monitoring Reports, will be automatically continued and will remain fully effective and enforceable pending the grant or denial of the application for permit renewal.

4. This NPDES permit does not constitute authorization to construct or make modifications to wastewater treatment facilities necessary to meet the terms and conditions of this permit.

DATE PERMIT ISSUED JUL 28 2004 ISSUED BY

Tim V. Dreier, P.E.
Water Management Program Manager

DATE EFFECTIVE AUG - 1 2004

1. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS FOR OUTFALL 001 WHICH RECEIVES WASTE FROM:
Centralized waste treatment facility, storm water, blanket drains, leachate
at Latitude 40° 15' 10" Longitude 79° 41' 50" Stream Code 37556 River Mile Index (RMI) 10.42

a. The permittee is authorized to discharge during the period from effective date through expiration date.

b. Based on the production data and/or anticipated wastewater characteristics and flows described in the permit application and its supporting documents and/or amendments, the following effluent limitations and monitoring requirements apply. Total (dissolved plus suspended fraction) is implied for each parameter unless otherwise indicated.

	DISCHARGE LIMITATIONS (gross unless otherwise indicated)					MONITORING REQUIREMENTS	
	Mass Units (lbs/day except flow)		Concentrations (mg/l unless otherwise indicated)				
Discharge Parameter	Average Monthly	Max. Daily	Average Monthly	Max. Daily	Instant. Max.	Measurement Frequency	Sample Type
Flow (mgd)	Monitor and Report					continuous	recorded
Total Suspended Solids			30	60		1/week	24-hour composite
Oil and Grease			15		30	1/week	grab
NH_3-N			45	90		1/week	24-hour composite
Total Residual Chlorine			0.5	1.0		1/week	grab
Barium			4.0	8.0		2/month	24-hour composite
Iron			3.5	7.0		2/month	24-hour composite
Cadmium			0.025	0.05		2/month	24-hour composite
Chromium			0.5	1.0		2/month	24-hour composite
Hexavalent Chromium			0.05	0.1		2/month	24-hour composite

PART A

1. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS FOR OUTFALL 001 (CONTINUED):

	DISCHARGE LIMITATIONS (gross unless otherwise indicated)					MONITORING REQUIREMENTS	
	Mass Units (lbs/day except flow)		Concentrations (mg/l unless otherwise indicated)				
Discharge Parameter	Average Monthly	Max. Daily	Average Monthly	Max. Daily	Instant. Max.	Measurement Frequency	Sample Type
Copper			0.1	0.2		2/month	24-hour composite
Lead			0.12	0.24		2/month	24-hour composite
Nickel			1.0	2.0		2/month	24-hour composite
Zinc			0.35	0.7		2/month	24-hour composite
Cyanide, Free			0.1	0.2		2/month	24-hour composite
Phenols			0.1	0.2		2/month	24-hour composite
Osmotic Pressure (mo/kg)			1000	2000		2/month	24-hour composite
Aluminum			1.0	2.0		2/month	24-hour composite
Silver			0.005	0.01		2/month	24-hour composite
Tin			Monitor/Report			2/quarter	24-hour composite
Molybdenum			Monitor/Report			2/quarter	24-hour composite
Antimony			Monitor/Report			2/quarter	24-hour composite
pH			not less than 6.0 nor greater than 9.0 standard units			continuous	recorded

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: at the weir box.

1. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS FOR INTERNAL OUTFALL 101 WHICH RECEIVES WASTE FROM:
   Pump Station No. 5
   a. The permittee is authorized to discharge during the period from effective date through expiration date.

   b. Based on the production data and/or anticipated wastewater characteristics and flows described in the permit application and its supporting documents and/or amendments, the following effluent limitations and monitoring requirements apply. Total (dissolved plus suspended fraction) is implied for each parameter unless otherwise indicated.

	DISCHARGE LIMITATIONS (gross unless otherwise indicated)					MONITORING REQUIREMENTS	
	Mass Units (lbs/day except flow)		Concentrations (mg/l unless otherwise indicated)				
Discharge Parameter	Average Monthly	Max. Daily	Average Monthly	Max. Daily	Instant. Max.	Measurement Frequency	Sample Type
Flow (mgd)	Monitor and Report					continuous	recorded
Antimony				1.9		2/month	24-hour composite
Arsenic				1.4		2/month	24-hour composite
Barium				1.2		2/month	24-hour composite
Beryllium				0.82		2/month	24-hour composite
Cadmium				0.69		2/month	24-hour composite
Chromium				2.77		2/month	24-hour composite
Cyanide (free)				0.86		2/month	24-hour composite
Cyanide, Total				1.2		2/month	24-hour composite
Fluoride				35		2/month	24-hour composite
Lead				0.69		2/month	24-hour composite

1. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS FOR INTERNAL OUTFALL 101 (CONTINUED):

Discharge Parameter	DISCHARGE LIMITATIONS (gross unless otherwise indicated)					MONITORING REQUIREMENTS	
	Mass Units (lbs/day except flow)		Concentrations (mg/l unless otherwise indicated)				
	Average Monthly	Max. Daily	Average Monthly	Max. Daily	Instant. Max.	Measurement Frequency	Sample Type
Mercury				0.15		2/month	24-hour composite
Nickel				3.98		2/month	24-hour composite
Selenium				0.82		2/month	24-hour composite
Silver				0.43		2/month	24-hour composite
Sulfide				14		2/month	24-hour composite
Thallium				1.4		2/month	24-hour composite
Vanadium				4.3		2/month	24-hour composite
pH				Monitor/Report		continuous	recorded

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: at the discharge pipe from Pump Station No. 5.

1. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS FOR INTERNAL OUTFALL 201 WHICH RECEIVES WASTE FROM:
Centralized waste treatment facility

a. The permittee is authorized to discharge during the period from effective date through expiration date.

b. Based on the production data and/or anticipated wastewater characteristics and flows described in the permit application and its supporting documents and/or amendments, the following effluent limitations and monitoring requirements apply. Total (dissolved plus suspended fraction) is implied for each parameter unless otherwise indicated.

	DISCHARGE LIMITATIONS (gross unless otherwise indicated)					MONITORING REQUIREMENTS	
	Mass Units (lbs/day except flow)		Concentrations (mg/l unless otherwise indicated)				
Discharge Parameter	Average Monthly	Max. Daily	Average Monthly	Max. Daily	Instant. Max.	Measurement Frequency	Sample Type
Flow (mgd)	Monitor and Report					continuous	recorded
Total Suspended Solids			31	60		1/week	24-hour composite
Oil and Grease			50.2	205		1/week	grab
Antimony			0.206	0.249		1/week	24-hour composite
Arsenic			0.104	0.162		1/week	24-hour composite
Cadmium			0.0962	0.474		1/week	24-hour composite
Chromium			3.07	15.5		1/week	24-hour composite
Cobolt			0.124	0.192		1/week	24-hour composite
Copper			1.06	4.14		1/week	24-hour composite
Cyanide, Total			178	500		1/week	24-hour composite
Lead			0.283	1.32		1/week	24-hour composite

1. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS FOR INTERNAL OUTFALL 201 (CONTINUED):

Discharge Parameter	DISCHARGE LIMITATIONS (gross unless otherwise indicated)					MONITORING REQUIREMENTS	
	Mass Units (lbs/day except flow)		Concentrations (mg/l unless otherwise indicated)				
	Average Monthly	Max. Daily	Average Monthly	Max. Daily	Instant. Max.	Measurement Frequency	Sample Type
Mercury			0.000739	0.00234		1/week	24-hour composite
Nickel			1.45	3.95		1/week	24-hour composite
Silver			0.0351	0.120		1/week	24-hour composite
Tin			0.100	0.409		1/week	24-hour composite
Titanium			0.0618	0.0947		1/week	24-hour composite
Vanadium			0.0662	0.218		1/week	24-hour composite
Zinc			0.641	2.87		1/week	24-hour composite
pH	not less than 6.0 nor greater than 9.0 standard units					continuous	recorded

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: At Outfall 201

1. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS FOR OUTFALL 002 WHICH RECEIVES WASTE FROM:
Storm water
at Latitude 40° 12' 59" Longitude 79° 41' 50" Stream Code 37634 River Mile Index (RMI) 0.22

a. The permittee is authorized to discharge during the period from effective date through expiration date.

b. Based on the production data and/or anticipated wastewater characteristics and flows described in the permit application and its supporting documents and/or amendments, the following effluent limitations and monitoring requirements apply. Total (dissolved plus suspended fraction) is implied for each parameter unless otherwise indicated.

	DISCHARGE LIMITATIONS (gross unless otherwise indicated)					MONITORING REQUIREMENTS	
	Mass Units (lbs/day except flow)		Concentrations (mg/l unless otherwise indicated)				
Discharge Parameter	Average Monthly	Max. Daily	Average Monthly	Max. Daily	Instant. Max.	Measurement Frequency	Sample Type

See Part C Condition No. 9.

1. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS FOR OUTFALL 003 WHICH RECEIVES WASTE FROM:
Storm Water
at Latitude 40° 12' 59" Longitude 79° 41' 50" Stream Code 37634 River Mile Index (RMI) 0.22

a. The permittee is authorized to discharge during the period from effective date through expiration date.

b. Based on the production data and/or anticipated wastewater characteristics and flows described in the permit application and its supporting documents and/or amendments, the following effluent limitations and monitoring requirements apply. Total (dissolved plus suspended fraction) is implied for each parameter unless otherwise indicated.

	DISCHARGE LIMITATIONS (gross unless otherwise indicated)					MONITORING REQUIREMENTS	
	Mass Units (lbs/day except flow)		Concentrations (mg/l unless otherwise indicated)				
Discharge Parameter	Average Monthly	Max. Daily	Average Monthly	Max. Daily	Instant. Max.	Measurement Frequency	Sample Type

See Part C Condition No. 9.

1. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS FOR OUTFALL 004 WHICH RECEIVES WASTE FROM:
Storm Water
at Latitude 40° 12' 36" Longitude 79° 41' 38" Stream Code 37634 River Mile Index (RMI) 0.57

a. The permittee is authorized to discharge during the period from effective date through expiration date.

b. Based on the production data and/or anticipated wastewater characteristics and flows described in the permit application and its supporting documents and/or amendments, the following effluent limitations and monitoring requirements apply. Total (dissolved plus suspended fraction) is implied for each parameter unless otherwise indicated.

	DISCHARGE LIMITATIONS (gross unless otherwise indicated)					MONITORING REQUIREMENTS	
	Mass Units (lbs/day except flow)		Concentrations (mg/l unless otherwise indicated)				
Discharge Parameter	Average Monthly	Max. Daily	Average Monthly	Max. Daily	Instant. Max.	Measurement Frequency	Sample Type

See Part C Condition No. 9.

1. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS FOR OUTFALL 007 WHICH RECEIVES WASTE FROM:
the sewage treatment plant
at Latitude 40° 13' 12" Longitude 79° 41' 47" Stream Code 37556 River Mile Index (RMI) 10.42

a. The permittee is authorized to discharge during the period from the 37th month of the permit through expiration date.

b. Based on the production data and/or anticipated wastewater characteristics and flows described in the permit application and its supporting documents and/or amendments, the following effluent limitations and monitoring requirements apply. Total (dissolved plus suspended fraction) is implied for each parameter unless otherwise indicated.

	DISCHARGE LIMITATIONS (gross unless otherwise indicated)							MONITORING REQUIREMENTS	
	Mass Units (lbs/day except flow)			Concentrations (mg/l unless otherwise indicated)					
Discharge Parameter	Average Monthly	Average Weekly	Max. Daily	Average Monthly	Average Weekly	Max. Daily	Instant. Max.	Measurement Frequency	Sample Type
Flow (mgd)	Monitor and Report							2/month	measured
CBOD-5 Day				25			50	2/month	grab
Suspended Solids				30			60	2/month	grab
Total Residual Chlorine				0.5			1.0	2/month	grab
Fecal Coliform Organisms	refer to Part C for effective disinfection							2/month	grab
pH	not less than 6.0 nor greater than 9.0 standard units							2/month	grab

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: at Outfall 007

1. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS FOR OUTFALL 005 WHICH RECEIVES WASTE FROM:
Storm water and Pond No. 4 overflow
at Latitude 40°12' 54" Longitude 79°41' 56" Stream Code 37634 River Mile Index (RMI) 0.22

a. The permittee is authorized to discharge during the period from effective date through expiration.

b. Based on the production data and/or anticipated wastewater characteristics and flows described in the permit application and its supporting documents and/or amendments, the following effluent limitations and monitoring requirements apply. Total (dissolved plus suspended fraction) is implied for each parameter unless otherwise indicated.

	DISCHARGE LIMITATIONS (gross unless otherwise indicated)					MONITORING REQUIREMENTS	
	Mass Units (lbs/day except flow)		Concentrations (mg/l unless otherwise indicated)				
Discharge Parameter	Average Monthly	Max. Daily	Average Monthly	Max. Daily	Instant. Max.	Measurement Frequency	Sample Type
Flow (mgd)	Monitor and Report					1/discharge	estimate
Total Suspended Solids			30		60	2/discharge	grab
Oil and Grease			15		30	2/discharge	grab
	See Part C Condition No. 9.						
pH	not less than 6.0 nor greater than 9.0 standard units					2/discharge	grab

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: at Outfall 005.

1. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS FOR OUTFALL 006 WHICH RECEIVES WASTE FROM:
Impoundment No. 6 blanket drain at Latitude 40° 12' 44" Longitude 79° 41' 39" Stream Code 37634 River Mile Index (RMI) 0.45

a. The permittee is authorized to discharge during the period from effective date through expiration date.

b. Based on the production data and/or anticipated wastewater characteristics and flows described in the permit application and its supporting documents and/or amendments, the following effluent limitations and monitoring requirements apply. Total (dissolved plus suspended fraction) is implied for each parameter unless otherwise indicated.

	DISCHARGE LIMITATIONS (gross unless otherwise indicated)					MONITORING REQUIREMENTS	
	Mass Units (lbs/day except flow)		Concentrations (mg/l unless otherwise indicated)				
Discharge Parameter	Average Monthly	Max. Daily	Average Monthly	Max. Daily	Instant. Max.	Measurement Frequency	Sample Type

See Part C Condition No. 14

2. DEFINITIONS

a. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility.

b. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

c. "Daily discharge" means the "discharge of a pollutant" measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in units of mass, the "daily discharge" is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the "daily discharge" is calculated as the average measurement of the pollutant over the day.

d. "Average" refers to the use of an arithmetic mean, unless otherwise specified in this permit.

e. "Geometric average (mean)" means the average of a set of n sample results given by the n^{th} root of their product.

f. "Average monthly discharge limitation" means the highest allowable average of "daily discharge" over a calendar month, calculated as the sum of all "daily discharge" measured during a calendar month divided by the number of "daily discharge" measured during that month.

g. "Average weekly discharge limitation" means the highest allowable average of "daily discharge" over a calendar week, calculated as the sum of all "daily discharge" measured during a calendar week divided by the number of "daily discharge" measured during that week.

h. "Maximum daily discharge limitation" means the highest allowable "daily discharge."

i. "Maximum any time" (or instantaneous maximum) means the concentration not to be exceeded at any time in any grab sample.

j. "Composite sample" (for all except GC/MS volatile organic analysis) means a combination of at least 8 individual samples of at least 100 milliliters collected manually or automatically at periodic intervals during the operating hours of a facility over a 24 hour period. The composite must be flow-proportional; either the volume of each individual sample is proportional to discharge flow rates, or the sampling interval (for constant volume samples) is proportional to the flow rates over the time period used to produce the composite.

"Composite sample for GC/MS volatile organic analysis" consists of at least four (rather than eight) aliquots or grab samples collected during actual hours of discharge over a 24 hour period and need not be flow proportioned. The four samples are composited in the laboratory immediately before analysis, and only one analysis performed.

The maximum time period between individual samples used for any "composite sample" shall not exceed two hours, except that for wastes of a uniform nature the samples may be collected on a frequency of at least twice per working shift and shall be equally spaced over a 24-hour period (or over the operating day if flows are of a shorter duration).

k. "Grab sample" means an individual sample of at least 100 milliliters collected at a randomly-selected time over a period not to exceed 15 minutes.

l. "i-s" means immersion stabilization - in which a calibrated device is immersed in the wastewater until the reading is stabilized.

m. "Daily average temperature" means the average of all temperature measurements made, or the mean value plot of the record of a continuous automated temperature recording instrument, either during a calendar day or during the operating day if flows are of a shorter duration.

n. "Measured flow" means any method of liquid volume measurement, the accuracy of which has been previously demonstrated in engineering practice, or for which a relationship to absolute volume has been obtained.

o. "At outfall XXX" means a sampling location in outfall line XXX below the last point at which wastes are added to outfall line XXX, or where otherwise specified.

p. "Estimated flow" means any method of liquid volume measurement based on a technical evaluation of the sources contributing to the discharge including, but not limited to, pump capabilities, water meters and batch discharge volumes.

q. "Non-contact cooling water" means water used to reduce temperature which does not come in direct contact with any raw material, intermediate product, waste product (other than heat), or finished product.

Such water may on occasion, as a result of corrosion, cooling system leakage or similar cooling system failures contain small amounts of process chemicals: provided, that all reasonable measures have been taken to prevent, reduce, eliminate and control to the maximum extent feasible such contamination: and provided further, that all reasonable measures have been taken that will mitigate the effects of such contamination once it has occurred.

r. "Toxic pollutant" means those pollutants, or combinations of pollutants, including disease-causing agents, which after discharge and upon exposure, ingestion, inhalation, or assimilation into any organism, either directly from the environment or indirectly by ingestion through food chains, will, on the basis of information available to the Administrator of the United States Environmental Protection Agency, cause death, disease, behavioral abnormalities, cancer, genetic mutations, physiological malfunctions, including malfunctions in reproduction, or physical deformations in such organisms or their offspring.

s. "Hazardous substance" means any substance designated under Title 40 Code of Federal Regulations Part 116 (40 CFR 116) pursuant to Section 311 of the Clean Water Act.

t. "Publicly Owned Treatment Works" or "POTW" means a facility as defined by Section 212 of the Clean Water Act which is owned by a State or Municipality, as defined by Section 502(4) of the Clean Water Act, including any sewers that convey wastewater to such a treatment works, but not including pipes, sewers or other conveyances not connected to a facility providing treatment. The term also means the municipality as defined in Section 502(4) of the Clean Water Act which has jurisdiction over the indirect discharges to and the discharges from such a treatment works.

u. "Industrial User" means an establishment which discharges or introduces industrial wastes into a Publicly Owned Treatment Works (POTW).

v. "Total Dissolved Solids" means the total dissolved (filterable) solids as determined by use of the method specified in 40 CFR 136.

w. "Storm water associated with industrial activity" means the discharge from any conveyance which is used for collecting and conveying storm water and which is directly related to manufacturing, processing, or raw materials storage areas as defined at 40 CFR 122.26(b)(14).

x. "Storm water" means storm water runoff, snow melt runoff, and surface runoff and drainage.

y. "Best Management Practices ("BMPs")" means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of "Waters of the United States". BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

3. SELF-MONITORING, REPORTING, AND RECORDS KEEPING

a. Representative Sampling

(1) Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.

(2) Records Retention

Except for records of monitoring information required by this permit related to the permittee's sewage sludge use and disposal activities which shall be retained for a period of at least 5 years, all records of monitoring activities and results (including all original strip chart recordings for continuous monitoring instrumentation and calibration and maintenance records), copies of all reports required by this permit, and records of all data used to complete the application for this permit shall be retained by the permittee for three (3) years from the date of the sample measurement, report, or application. This three year period shall be extended as requested by the Department or the EPA Regional Administrator.

(3) Recording of Results

For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall record the following information:

(i) The exact place, date, and time of sampling or measurements;

(ii) The person(s) who performed the sampling or measurements;

(iii) The date(s) the analyses were performed;

(iv) The person(s) who performed the analyses;

(v) The analytical techniques or methods used; and the associated detection level; and

(vi) The results of such analyses.

(4) Test Procedures

Unless otherwise specified in this permit, the test procedures for the analysis of pollutants shall be those contained in 40 CFR 136 (or in the case of sludge use or disposal, approved under 40 CFR 136 unless otherwise specified in 40 CFR 503), or alternate test procedures approved pursuant to those parts, unless other test procedures have been specified in the permit.

(5) Quality Assurance/Control

In an effort to assure accurate self-monitoring analyses results:

(a) Permittee or its designated laboratory shall participate in the periodic scheduled quality assurance inspections conducted by the Department and EPA.

(b) The permittee or its designated laboratory shall develop and implement a program to assure the quality and accurateness of the analyses performed to satisfy the requirements of this permit in accordance with 40 CFR 136, Appendix A

b. Reporting of Monitoring Results

(1) The permittee shall effectively monitor the operation and efficiency of all wastewater treatment and control facilities, and the quantity and quality of the discharge(s) as specified in this permit.

(2) Unless instructed otherwise in Part C of this permit, monitoring results obtained each month shall be summarized for that month and reported on a Discharge Monitoring Report (DMR).

(3) The completed DMR Form shall be signed and certified either by the following applicable person (as defined in 40 CFR 122.22(a)) or by that person's duly authorized representative (as defined in 40 CFR 122.22(b)):

- For a corporation - by a responsible corporate officer
- For a Partnership or Sole Proprietorship - by a general partner or the proprietor, respectively
- For a Municipality, State, Federal or other public agency - by a principle executive officer or ranking elected official.

If signed by other than the above, written notification of delegation of DMR signatory authority must be submitted to the Department. The DMR and any other reports required herein shall be submitted to the appropriate agency at the address listed in Part C of this permit and postmarked no later than the 28th day of the following month.

(4) If the permittee monitors any pollutant, using analytical methods described in A.3.a(4) above, more frequently than the permit requires, the results of this monitoring shall be incorporated, as appropriate, into the calculations used to report self-monitoring data on the DMR.

c. Reporting Requirements

(1) Planned Changes - The permittee shall give notice to the Department as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:

(a) The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR 122.29(b); or

(b) The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements under 40 CFR 122.42(a)(1).

(c) The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan;

(2) Anticipated Non-Compliance

The permittee shall give advance notice to the Department of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

(3) Compliance Schedules

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date.

(4) Twenty-Four Hour Reporting

(a) The permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

(b) The following shall be included as information which must be reported within 24 hours under this paragraph.

(i) Any unanticipated bypass which exceeds any effluent limitation in the permit.

(ii) Any catastrophic event which causes the discharge to exceed effluent limitations in this permit.

(iii) Violation of a maximum daily discharge limitation for any of the pollutants listed by the Department in the permit to be reported within 24 hours.

(c) The Department may waive the written report on a case-by-case basis for reports under paragraph c (4)(a) of this section if the oral report has been received within 24 hours.

(5) Other Noncompliance

The permittee shall report all instances of noncompliance not reported under paragraphs c (3), (4) of this section, at the time monitoring reports are submitted. The reports shall contain the information listed in paragraph c (4) of this section.

Compliance with reporting requirements under A.3.c. above shall not excuse a person from immediate notification of incidents causing or threatening pollution pursuant to 25 Pa. Code, Chapter 91.33.

d. Specific Toxic Substance Notification Levels (for Manufacturing, Commercial, Mining, and Silvicultural Dischargers) The permittee shall notify the Department as soon as it knows or has reason to believe the following:

(1) That any activity has occurred, or will occur, which would result in the discharge of any toxic pollutant which is not limited in the permit, if that discharge on a routine or frequent basis will exceed the highest of the following "notification levels".

(a) One hundred micrograms per liter.

(b) Two hundred micrograms per liter for acrolein and acrylonitrile.

(c) Five hundred micrograms per liter for 2,4-dinitrophenol and 2-methyl-4,6-dinitrophenol.

(d) One milligram per liter for antimony.

(e) Five (5) times the maximum concentration value reported for that pollutant in the permit application.

(f) Any other notification level established by the Department.

(2) That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":

(a) Five hundred micrograms per liter;

(b) One milligram per liter for antimony;

(c) Ten (10) times the maximum concentration value reported for that pollutant in the permit application;

(d) Any other notification level established by the Department.

1. MANAGEMENT REQUIREMENTS

a. Compliance Schedules

(1) The permittee shall achieve compliance with the terms and conditions of this permit within the time frames specified in Part C of this permit.

(2) The permittee shall submit reports of compliance or noncompliance with, or progress reports as applicable, any interim and final requirements contained in this permit. Such reports shall be submitted no later than 14 days following the applicable schedule date or compliance deadline.

b. Permit Modification, Termination, or Revocation and Reissuance

(1) This permit may be modified, terminated, or revoked in whole or in part during its term for cause including, but not limited to, any of the causes specified in 25 Pa. Code, Chapter 92.

(2) The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated non-compliance, does not stay any permit condition.

(3) In the absence of a Departmental action to modify or revoke and reissue this permit, the permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants within the time specified in the regulations that establish those standards or prohibitions.

c. Duty to Provide Information

(1) The permittee shall furnish to the Department, within a reasonable time, any information which the Department may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit.

(2) The permittee shall furnish to the Department, upon request, copies of records required to be kept by this permit.

(3) Other Information - Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Department, it shall promptly submit such facts or information to the Department.

(4) Where the permittee is a POTW, the permittee shall provide adequate notice to the Department of the following:

(a) Any new introduction of pollutants into the POTW from an indirect discharger which would be subject to Sections 301 and 306 of the Clean Water Act if it were otherwise discharging those pollutants.

(b) Any substantial change in the volume or character of pollutants being introduced into the POTW by an Industrial User which was discharging into the POTW at the time of issuance of this permit.

(c) Adequate notice shall include information on:

(i) the quality and quantity of the effluent introduced into the POTW, and

(ii) any anticipated impact of the change on the quantity or quality of the effluent to be discharged from the POTW.

The submission of the above information in the POTW's Annual Wasteload Management Report, required under the provisions of 25 Pa. Code Chapter 94, will normally be considered as providing adequate notice to the Department, unless a more stringent time period is required by law, regulation, or permit condition in which case the more stringent submission date shall apply.

(d) The identity of Industrial Users served by the POTW which are subject to pretreatment standards adopted under Section 307(b) of the Clean Water Act; the POTW shall also specify the total volume of discharge and estimated concentration of each pollutant discharged into the POTW by the Industrial Users.

(e) The POTW shall require all Industrial Users to comply with the reporting requirements of Sections 204(b), 307, and 308 of the Clean Water Act and any regulations adopted thereunder, and the Clean Streams Law and any regulations adopted thereunder.

d. Facilities Operation

The permittee shall at all times maintain in good working order and properly operate and maintain all facilities and systems which are installed or used by the permittee to achieve compliance with the terms and conditions of this permit. Proper operation and maintenance includes, but is not limited to effective performance based on designed facility removals, adequate funding, effective management, adequate operator staffing and training, and adequate laboratory controls including appropriate quality assurance procedures. This provision also includes the operation of backup or auxiliary facilities or similar systems which are installed by the permittee, only when necessary to achieve compliance with the terms and conditions of this permit.

The permittee shall develop, install, and maintain Best Management Practices to control or abate the discharge of pollutants when the practices are reasonably necessary to achieve the effluent limitations and standards in this permit or to carry out the purposes and intent of the Clean Water Act, or when required to do so by the Department.

e. Adverse Impact

The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

f. Bypassing

(1) Bypassing Not Exceeding Permit Limitations - The permittee may allow a bypass to occur which does not cause effluent limitations to be violated, but only if the bypass is essential for maintenance to assure efficient operation. This type of bypassing is not subject to the reporting and notification requirements of Part A.3.c.

(2) Other Bypassing - In all other situations bypassing is prohibited unless all of the following conditions are met:

(a) A bypass is unavoidable to prevent loss of life, personal injury or "severe property damage";

(b) There are no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate backup equipment should have been installed (in the exercise of reasonable engineering judgment) to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance;

(c) The permittee submitted the necessary reports required under Part A.3.c.

(3) The Department may approve an anticipated bypass, after considering its adverse effects, if the Department determines that it will meet the three conditions (a through c) listed above.

2. PENALTIES AND LIABILITY

a. Violations of Permit Conditions

Any person violating Sections 301, 302, 306, 307, 308, 318, or 405 of the Clean Water Act or any permit condition or limitation implementing such sections in a permit issued under Section 402 of the Act is subject to civil, administrative, and/or criminal penalties as set forth in 40 CFR 122.41(a)(2).

Any person or municipality who violates any provision of this permit, any rule, regulation, or order of the Department, or any condition or limitation of any permit issued pursuant to the Clean Streams Law is subject to criminal and/or civil penalties as set forth in Sections 602, 603 and 605 of the Clean Streams Law.

b. Falsifying Information

Any person who does any of the following:

Falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit; or

Knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit (including monitoring reports or reports of compliance or non- compliance);

shall, upon conviction, be punished by a fine and/or imprisonment as set forth in 18 P.S. §4904 and 40 CFR 122.41(j)(5) and (k)(2).

c. Liability

Nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance pursuant to Section 309 of the Clean Water Act or Sections 602, 603 or 605 of the Clean Streams Law.

Nothing in this permit shall be construed to preclude the institution of any legal action or to relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject to under the Clean Water Act and the Clean Streams Law.

d. Enforcement Proceedings

(1) It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

3. OTHER RESPONSIBILITIES

a. Right of Entry

Pursuant to Sections 5(b) and 305 of Pennsylvania's Clean Streams Law and 25 Pa. Code, Chapter 92, the permittee shall allow the head of the Department, the EPA Regional Administrator, and/or their authorized representatives, upon the presentation of credentials and other documents as may be required by law:

(1) To enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;

(2) To have access to and copy at reasonable times any records that must be kept under the conditions of this permit;

(3) To inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices or operations regulated or required under this permit;

(4) To sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act, any substances or parameters at any location.

b. Transfer of Permits

(1) *Transfers by modification.* Except as provided in paragraph (2) of this section, a permit may be transferred by the permittee to a new owner or operator only if the permit has been modified or revoked and reissued, or a minor modification made to identify the new permittee and incorporate such other requirements as may be necessary under the Clean Water Act.

(2) *Automatic transfers.* As an alternative to transfers under paragraph (1) of this section, any NPDES permit may be automatically transferred to a new permittee if:

(a) The current permittee notifies the Department, at least 30 days in advance, of the proposed transfer date in paragraph (2)(b) of this section;

(b) The notice includes the appropriate Department transfer form signed by the existing and new permittees containing a specific date for transfer of permit responsibility, coverage, and liability between them; and

(c) The Department does not notify the existing permittee and the proposed new permittee of its intent to modify or revoke and reissue the permit. A modification under this subparagraph may also be a minor modification. If this notice is not received, the transfer is effective on the date specified in the agreement mentioned in paragraph (2)(b) of this section.

(3) In the event the Department does not approve transfer of the permit, the new owner or controller must submit a new permit application.

c. Property Rights

The issuance of this permit does not convey any property rights of any sort, or any exclusive privilege.

d. Other Laws

The issuance of a permit does not authorize any injury to persons or property or invasion of other private rights, or any infringement of State or local law or regulations.

OTHER REQUIREMENTS

1. In accordance with Part A.3.b of this permit, the permittee shall submit a copy of the Discharge Monitoring Reports to each of the following:

Department of Environmental Protection
Water Management
400 Waterfront Drive
Pittsburgh, PA 15222-4745

EPA Region III
NPDES Discharge Monitoring Reports (3WP31)
1650 Arch Street
Philadelphia, PA 19103-2029

Attn: Water Quality Specialist
Department of Environmental Protection
Greensburg District Office
Armbrust Building
R.D. #2, Box 603-C
Greensburg, PA 15601

2. Effluent limitations, monitoring requirements, and other standard and special conditions which relate to the discharge of pollutants authorized by this permit and which are contained in Water Quality Management Permit(s)

No. 6576203 issued on February 18, 1977
No. 6576203 issued on August 4, 1976
No. 6574202 issued on August 13, 1974

or any subsequent amendments or transfers are superseded by the terms and conditions of this permit, unless specifically noted otherwise herein.

3. When collecting samples that are to be analyzed for any of the priority pollutants, the permittee shall collect the sample type required by Part A of this permit, and the permittee shall use the methods and techniques in the attached instructions "Department of Environmental Protection, Water Management Program - Sampling and Analytical Testing Instructions". For each priority pollutant, the permittee shall use a method that will quantifiably measure the priority pollutant at or below the effluent limitation in Part A of this permit.

4. Collected screenings, slurries, sludges and other solids shall be handled and disposed of in compliance with 25 Pa. Code, Chapters 271, 273, 275, 283, and 285 (related to permits and requirements for landfilling, land application, incineration and storage of sewage sludge) Federal Regulations 40 CFR 257, and the Federal Clean Water Act and its amendments.

5. Sludges and other solids shall be handled and disposed of in compliance with the Solid Waste Management Act of 1980 (Act 97) and with 25 Pa. Code, Chapters 261, 262, 263, and 264 (related to permits and requirements for landfilling and storage of hazardous sludge) and applicable federal regulations, the Federal Clean Water Act, RCRA and their amendments.

6. Sludges and other solids shall be handled and disposed of in compliance with the Solid Waste Management Act of 1980 (Act 97) and with 25 Pa. Code, Chapters 287, 291, and 299 (relating to residual waste generators) and 288 and 289 (relating to residual waste landfills and impoundments) and the Federal Clean Water Act and its amendments.

7. All discharges of floating materials, oil, grease, scum and substances which produce tastes, color, odors, turbidity or settle to form deposits shall be controlled at levels which will not be inimical or harmful to the water uses to be protected or to human, animal, plant or aquatic life.

8. Effective disinfection to control disease producing organisms shall be the production of an effluent which will contain a concentration of fecal coliform organisms not greater than

   a. 200/100 ml as a monthly geometric mean, nor greater than 1000/100 ml in more than ten percent of the samples examined during any month from May through September inclusive.

   b. 2000/100 ml as a monthly geometric mean based on five consecutive samples collected on different days during any month from October through April inclusive.

9. REQUIREMENTS APPLICABLE TO STORM WATER OUTFALLS

   A. Prohibition of Non-Storm Water Discharges

      1. Except as provided in A.2, all discharges to storm water outfalls listed in Part A of this permit shall be composed entirely of uncontaminated storm water.

2. The following non-storm water discharges may be authorized, provided the discharge is in compliance with D.2.b: discharges from fire fighting activities; fire hydrant flushings, potable water sources including waterline flushings, irrigation drainage, lawn watering, routine external building washdown which does not use detergents or other compounds, pavement washwaters where spills or leaks of toxic or hazardous materials have not occurred (unless all spilled material has been removed) and where detergents are not used, air conditioning condensate, springs, uncontaminated groundwater, and foundation or footing drains where flows are not contaminated with process materials such as solvents.

B. Spills

This permit does not authorize the discharge of any polluting substances resulting from an on-site spill. Such spills shall be controlled through proper implementation of a PPC Plan as stated in Section D below.

C. This permit does not authorize any discharge (storm water or non-storm water) containing any pollutant that may cause or contribute to an impact on aquatic life or pose a substantial hazard to human health or the environment due to its quantity or concentration.

D. Preparedness, Prevention and Contingency Plans

1. Development of Plan

Operators of facilities shall have developed a Preparedness, Prevention and Contingency (PPC) Plan in accordance with 25 Pa. Code § 91.34 and Document 400-2200-001, "Guidelines for the Development and Implementation of Environmental Emergency Response Plans". The PPC Plan shall identify potential sources of pollution that may reasonably be expected to affect the quality of storm water discharges from the facility. In addition, the PPC Plan shall describe the BMPs that are to be used to reduce the pollutants in storm water discharges at the facility ensuring compliance with the terms and conditions of this permit.

2. Non-Storm Water Discharges

a. The PPC Plan shall contain a certification that the discharge has been tested or evaluated for the presence of non-storm water discharges. The certification shall include the identification of potential significant sources of non-storm water at the site, a description of the results of any test and/or evaluation for the presence of non-storm water discharges, the evaluation criteria or testing methods used, the date of any testing and/or evaluation, and the on-site drainage points that were directly observed during the test. Such certification may not be feasible if the facility operating the storm water discharge does not have access to an outfall, manhole, or other point of access to the ultimate conduit that receives the discharge. In such cases, the source identification section of the PPC Plan shall indicate why the certification was not feasible. A discharger that is unable to provide the certification must notify the Department within 180 days of the effective date of this permit.

b. Except for flows from fire fighting activities, sources of non-storm water listed in A.2. (authorized non-storm water discharges) that are combined with storm water discharges must be identified in the plan. The plan shall identify and ensure the implementation of appropriate pollution prevention measures for the non-storm water component(s) of the discharge.

3. Special Requirements for SARA Title III, Section 313 Facilities

a. Facilities subject to SARA Title III, Section 313 shall include in the PPC Plan a description of releases to land or water of Section 313 water priority chemicals that have occurred within the last three years. Each of the following shall be evaluated for the reasonable potential for contributing pollutants to runoff: loading and unloading operations, outdoor storage activities, outdoor manufacturing or processing activities, significant dust or particulate generating process, and on-site waste disposal practices. Factors to consider include the toxicity of chemicals; quantity of chemicals used, produced or discharged; the likelihood of contact with storm water; and history of significant leaks or spills of toxic or hazardous pollutants.

b. Engineering Certification. No storm water PPC Plan for facilities subject to SARA Title III, Section 313 requirements for chemicals that are classified as "Section 313 water priority chemicals" shall be effective unless it has been reviewed by a Registered Professional Engineer and certified to by such Professional Engineer. A Registered Professional Engineer shall recertify the PPC Plan every year thereafter. This certification may be combined with the required annual evaluation in D.4. By means of these certifications, the engineer, having examined the facility and being familiar with the provisions of this part, shall attest that the storm water PPC Plan has been prepared in accordance with good engineering practices. Such certification shall in no way relieve the owner or operator of a facility covered by the PPC Plan of the duty to prepare and fully implement such Plan.

4. Comprehensive Site Compliance Evaluations and Record Keeping

a. Qualified personnel shall conduct site compliance evaluations at least once a year. Such evaluations shall include:

Visual inspection and evaluation of areas contributing to a storm water Discharge for evidence of, or the potential for, pollutants entering the drainage system. Measures to reduce pollutant loadings shall be evaluated to determine whether they are adequate and properly implemented in accordance with the terms of the permit or whether additional control measures are needed. Structural storm water management measures, sediment and erosion control measures, and other structural pollution prevention measures identified in the plan shall be observed to ensure that they are operating correctly. A visual inspection of equipment needed to implement the plan, such as spill response equipment, shall be made.

b. Based on the results of the inspection, the description of potential pollutant sources identified in the PPC Plan, and pollution prevention measures and controls identified in the plan shall be revised as appropriate within 15 days of such inspection and shall provide for implementation of any changes to the plan in a timely manner, but in no case more than 90 days after the inspection.

c. A report summarizing the scope of the inspection shall be completed and made available upon request and retained as part of the PPC Plan for at least one year after coverage under this permit terminates.

E. Storm Water Sampling and Reporting

1. If storm water samples are required by Part A of this permit, they shall be collected as grab samples during the first 30 minutes of the discharge or as soon thereafter as practicable.

2. When the discharger is unable to collect samples due to adverse climatic conditions or other circumstances beyond the permittee's control, the discharger must submit, in lieu of sampling data, an explanation with the Discharge Monitoring Report(s) (DMR) of exactly why samples could not be collected, including available documentation of the event.

3. Storm water monitoring results shall be summarized on the attached DMR and submitted to the Department.

10. Total Residual Chlorine (TRC) Minimization

The permittee will ensure that applied chlorine dosages, used for disinfection or other purposes, are optimized to the degree necessary such that the total residual chlorine in the discharge does not cause an adverse stream impact. In doing so, the permittee shall consider relevant factors affecting chlorine dosage, such as wastewater characteristics, mixing and contact times, desired result of chlorination, and expected impact on the receiving water body.

To reduce or eliminate the amount of chlorine discharged into water bodies, the permittee must: (1) improve/adjust process controls and (2) improve operation/maintenance practices.

If the Department determines or receives documented evidence levels of TRC in the permittee's effluent are causing adverse impacts in the receiving water, the permittee shall institute necessary additional steps to reduce or eliminate such impact.

11. Usage rates of any chemical additives used at this facility that may be discharged and blow-down rates shall be controlled by the permittee to prevent any impairments to receiving water uses and/or effluent limit violations. Chemical additives include, but are not limited to, any chemicals added to water for control of corrosion, scaling, algae, slime or fouling in cooling, boiler, or

process water systems. Chemical additives also include, but are not limited to agents used to aid in treatment such as water softeners, flocculants, coagulants, emulsion breakers, anti-foaming agents, dispersants, oxygen scavengers, pH stabilizers, and regenerants. Usage rates shall be limited to the minimum amount necessary to accomplish the intended purpose of the chemical addition.

Accurate and complete records of chemical usage and discharge volumes must be maintained and summarized on a monthly basis using the attached form and kept on-site by the permittee. These records must be produced upon request by the Department. The "allowable usage rate" is the rate specified in the information submitted as required below unless notified otherwise by the Department.

The information described below must be submitted within ninety (90) days of the effective date of this permit (with 2 copies) for all chemical additives currently in use at this facility, unless the specific chemical additive has already been approved in writing by the Department.

a. Trade name of the additive.

b. Name, address and phone number of the chemical additive manufacturer.

c. A list of all the active and inactive ingredients.

d. The additive usage rate (in lb/day or gal/day).

e. The conditioned water discharge rate (MGD).

f. The "in-system" concentration of whole product which the usage rate in item d. above will produce (mg/l). Include the product density (lb/gal) for liquids used to convert usage rate (gal/day) to concentration (mg/l).

g. Any available data regarding in-system degradation or decomposition of the additive and any other data or information that would be helpful to the Department in completing its review.

h. The expected concentration of the product at the final outfall.

i. The analytical test method that could be used to verify final outfall concentrations and the associated minimum analytical detection level.

j. A flow diagram showing the point of chemical addition and the affected outfalls.

k. 96 hour - LC50 bioassay data on the whole product for at least one species of freshwater fish (mg/l).

l. The MSDS and any mammalian toxicity data that is available for the whole product.

If the additive is currently in use at the facility, it may continue to be used at the maximum rate reported pursuant to item d. above unless the permittee is notified otherwise.

Whenever a change in chemical additives or an increase in usage rates is desired by the permittee, a complete written notification shall be submitted at least sixty (60) days prior to the proposed use of the chemical. This notification, at a minimum shall include the information outlined above. If the information is complete, and its use is not specifically denied, use of the proposed chemical additive is allowed 60 days after notification. The usage rate shall not exceed the maximum rate reported pursuant to item d. above.

Use of additives that contain one or more ingredients that are carcinogens are generally prohibited, and should be substituted with alternative products. If no alternatives are available, the permittee must submit written documentation with the information required above that no alternatives are available and that the carcinogen involved will be "not detectable" in the final effluent using the most sensitive analytical method available.

Based on the information submitted, the Department will determine if any effluent limitations or other restrictions are necessary to protect water quality standards for aquatic life or human health. The permittee is responsible for preventing impairments to receiving water uses independent of the Department's review of this material.

12. Discharge for Groundwater Underdrain Systems

The permittee shall monitor underdrain system discharges in accordance with the Solid Waste Management Permit issued to the permittee. Remedial measures necessary as a result of such monitoring will be taken as required by the Department.

13. If the permittee anticipates non-compliance with the osmotic pressure limit at Outfall 001 on page 2b of 14 of this permit for a given month due to dry weather flows, the discharge flow must be restricted. During periods in which the monthly average effluent concentration exceeds

1000 mo/kg but does not exceed 1500 mg/kg, the maximum daily flow rate must not exceed 50 gpm. If higher osmotic pressure levels are encountered, the maximum daily discharge flow rate must not exceed 40 gpm during this period and the monthly average effluent concentration shall not exceed 2000 mo/kg. The permittee may not invoke this condition for more than two consecutive months. Any such events must be fully documented as an attachment to the DMR for that month including the reason for elevated osmotic pressure levels, weekly measurements of osmotic pressure and daily measurement of flow (gpm). At all other times the effluent limits and conditions in Part A of the permit remain in full force and effect.

14. MAX Environmental Technologies, Inc. must provide three samples of effluent data for the pollutants listed in Groups 1 and 2 of the NPDES permit application for Outfall 006. The data must be submitted to the Department no later than 60 days after Outfall 006 is constructed as a direct stream discharge.

15. Oil bearing wastewaters shall at no time cause a film or sheen upon or discoloration of the waters of this Commonwealth or adjoining shoreline.

16. In no case shall the arithmetic means of the effluent values of the biochemical oxygen demand (BOD-5 Day) and suspended solids discharged during a period of 30 consecutive days exceed 15 percent of respective arithmetic means of the influent values for those parameters during the same time period except as specifically authorized by the Department.

17. In accordance with Part B.1.o of this permit, the permittee shall submit a copy of the attached Supplemental Sewage Sludge Report to accompany each copy of the monthly Discharge Monitoring Reports to the addresses as specified above. This form must be submitted even if sewage sludge is not hauled in a given month, in this event enter "no sludge hauled."

REFERENCE NO. 7

LABORATORY ANALYSIS COST

MAX Environmental - Yukon Facility
NPDES Monitoring Point Summary

Well		Total Suspended Solids	Oil & Grease	Total Residual Chlorine	Hexavalent Chromium	CBOD (5-Day)	Fecal coliform Organisms	Nitrate-Nitrogen	pH	Dissolved Metals (As, Ba, Cd, Cr, Fe, Pb, Na)
1	001	1/W	1/W	1/W	2/M			1/W		2/M
2	007	2/M		2/M		2/M	2/M		2/M	
Totals Analytical Tests		76	52	76	24	24	24	52	24	24
Geochemical Test Cost		$9.00	$30.00	$15.00	$15.00	$17.00	$40.00	$12.00	$5.00	$35.50
Total Cost		$684.00	$1,560.00	$1,140.00	$360.00	$408.00	$960.00	$624.00	$120.00	$852.00
Overall Total		**$6,708**								

Notes:

1. "1/W" denotes one sample per week
2. "2/M" two samples per month
3. Per NPDES Permit No. PA0027715

REFERENCE NO. 8

BUREAU OF LABOR STATISTICS; JUNE 2019 NATIONAL INDUSTRY-SPECIFIC OCCUPATIONAL EMPLOYMENT AND WAGE ESTIMATES

Occupational Employment Statistics

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May 2018 National Industry-Specific Occupational Employment and Wage Estimates

NAICS 561200 - Facilities Support Services

These national industry-specific occupational employment and wage estimates are calculated with data collected from employers of all sizes, in metropolitan and nonmetropolitan areas in every state and the District of Columbia, in NAICS 561200 - Facilities Support Services.

Additional information, including the hourly and annual 10th, 25th, 75th, and 90th percentile wages, and the percent of establishments reporting the occupation, is available in the downloadable XLS files.

NAICS 561200 - Facilities Support Services is part of: NAICS 561000 - Administrative and Support Services.

Links to OES estimates for other industries

SOC Major Groups in NAICS 561200 - Facilities Support Services:

- 00-0000 All Occupations
- 11-0000 Management Occupations
- 13-0000 Business and Financial Operations Occupations
- 15-0000 Computer and Mathematical Occupations
- 17-0000 Architecture and Engineering Occupations
- 19-0000 Life, Physical, and Social Science Occupations
- 21-0000 Community and Social Service Occupations
- 23-0000 Legal Occupations
- 25-0000 Education, Training, and Library Occupations
- 27-0000 Arts, Design, Entertainment, Sports, and Media Occupations
- 29-0000 Healthcare Practitioners and Technical Occupations
- 31-0000 Healthcare Support Occupations
- 33-0000 Protective Service Occupations
- 35-0000 Food Preparation and Serving Related Occupations
- 37-0000 Building and Grounds Cleaning and Maintenance Occupations
- 39-0000 Personal Care and Service Occupations
- 41-0000 Sales and Related Occupations
- 43-0000 Office and Administrative Support Occupations
- 47-0000 Construction and Extraction Occupations
- 49-0000 Installation, Maintenance, and Repair Occupations
- 51-0000 Production Occupations
- 53-0000 Transportation and Material Moving Occupations

To sort this table by a different column, click on the column header

NAICS 561200 - Facilities Support Services

Display All records

Filter Table by Text: Text search table: 17-3022

Occupation code	Occupation title (click on the occupation title to view an occupational profile)	Group	Employment	Employment RSE	Percent of total employment	Median hourly wage	Mean hourly wage	Annual mean wage	Mean wage RSE
17-3022	Civil Engineering Technicians	detail	250	30.3%	0.16%	$22.74	$23.94	$49,800	4.0%

Showing 1 to 1 of 1 entries (filtered from 338 total entries)

About May 2018 National Industry-Specific Occupational Employment and Wage Estimates

(1) Estimates for detailed occupations do not sum to the totals because the totals include occupations not shown separately. Estimates do not include self-employed workers.

(2) Annual wages have been calculated by multiplying the hourly mean wage by a "year-round, full-time" hours figure of 2,080 hours; for those occupations where there is not an hourly wage published, the annual wage has been directly calculated from the reported survey data.

(3) The relative standard error (RSE) is a measure of the reliability of a survey statistic. The smaller the relative standard error, the more precise the estimate.

(4) Wages for some occupations that do not generally work year-round, full time, are reported either as hourly wages or annual salaries depending on how they are typically paid.

(5) This wage is equal to or greater than $100.00 per hour or $208,000 per year.

(8) Estimate not released.

Other OES estimates and related information:

May 2018 National Occupational Employment and Wage Estimates (cross-industry estimates)

May 2018 State Occupational Employment and Wage Estimates (cross-industry estimates)

May 2018 Metropolitan and Nonmetropolitan Area Occupational Employment and Wage Estimates (cross-industry estimates)

May 2018 National Industry-Specific Occupational Employment and Wage Estimates

May 2018 Occupation Profiles

Technical notes

Last Modified Date: April 2, 2019

U.S. Bureau of Labor Statistics | Division of Occupational Employment Statistics, PSB Suite 2135, 2 Massachusetts Avenue, NE Washington, DC 20212-0001
www.bls.gov/OES | Telephone: 1-202-691-6569 | Contact OES

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May 2018 National Industry-Specific Occupational Employment and Wage Estimates

NAICS 561200 - Facilities Support Services

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- 39-0000 Personal Care and Service Occupations
- 41-0000 Sales and Related Occupations
- 43-0000 Office and Administrative Support Occupations
- 47-0000 Construction and Extraction Occupations
- 49-0000 Installation, Maintenance, and Repair Occupations
- 51-0000 Production Occupations
- 53-0000 Transportation and Material Moving Occupations

To sort this table by a different column, click on the column header

NAICS 561200 - Facilities Support Services

Display All records

Filter Table by Text: Text search table: 51-8031

Occupation code	Occupation title (click on the occupation title to view an occupational profile)	Group	Employment	Employment RSE	Percent of total employment	Median hourly wage	Mean hourly wage	Annual mean wage	Mean wage RSE
51-8031	Water and Wastewater Treatment Plant and System Operators	detail	350	25.9%	0.23%	$22.57	$22.79	$47,400	3.8%

Showing 1 to 1 of 1 entries (filtered from 338 total entries)

About May 2018 National Industry-Specific Occupational Employment and Wage Estimates

(1) Estimates for detailed occupations do not sum to the totals because the totals include occupations not shown separately. Estimates do not include self-employed workers.

(2) Annual wages have been calculated by multiplying the hourly mean wage by a "year-round, full-time" hours figure of 2,080 hours; for those occupations where there is not an hourly wage published, the annual wage has been directly calculated from the reported survey data.

(3) The relative standard error (RSE) is a measure of the reliability of a survey statistic. The smaller the relative standard error, the more precise the estimate.

(4) Wages for some occupations that do not generally work year-round, full time, are reported either as hourly wages or annual salaries depending on how they are typically paid.

(5) This wage is equal to or greater than $100.00 per hour or $208,000 per year.

(8) Estimate not released.

Other OES estimates and related information:

May 2018 National Occupational Employment and Wage Estimates (cross-industry estimates)

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May 2018 National Industry-Specific Occupational Employment and Wage Estimates

May 2018 Occupation Profiles

Technical notes

Last Modified Date: April 2, 2019


HIREVets.gov
HIRE
Vets Medallion Program
Recognizing
employers who
HIRE veterans

Date Prepared		I.D. Number
MARCH 2020	COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF WASTE MANAGEMENT	301071

BONDING WORKSHEET J
BORROW AREA CLOSURE

How do I start? Select a likely "worst case" scenario where you would have a maximum amount of the borrow area open and in need of closure. Provide a description of the scenario with references to site development stages.

1. Size of borrow area — 22 acres
2. Volume of material required for regrading: — 9,000 CY
3. Unit cost to regrade (provide equipment and rates) — 2.14 $/CY

Are sufficient soils available to complete job?
(list deficit amount and attach maps that identify sources and stockpiles)

4. Earthen Materials			Stockpile	Borrow	Onsite	Offsite	Processing Req'd Yes	Processing Req'd No
a. Structural Fill	NA	CY	☐	☐	☐	☐	☐	☐
b. Unit cost to place[1]	NA	$/CY						
c. Topsoil	9,000	CY	☐	☐	☐	☐	☐	☐
d. Unit cost to place[1]	3.70	$/CY						

5. Revegetation Cost

(Seeding rate used: Refer to Site CQA Plan lbs/acre)
(Lime rate used: Refer to Site CQA Plan tons/acre)
(Fertilizer rate used: Refer to Site CQA Plan tons/acre)
(Mulch rate used: Refer to Site CQA Plan tons/acre)

Unit cost to revegetate — 3,263 $/acre

6. E & S Controls — Not Applicable $/acre
7. Bond Maintenance Cost (required if off-site borrow area) — $ Not Applicable LS
8. Other costs (provide detail) — $ Not Applicable

[1] *The unit costs should include all associated costs including, but not limited to cost of material, excavation, transportation, processing and placement.*

9. Cost Summary

a.	Fill/Regrading (line 2 x line 3)		$ 19,260
b.	Structural Fill (line 4a x line 4b)		$ Not Applicable
c.	Topsoil (line 4c x line 4d)		$ 33,300
d.	Revegetation (line 1 x line 5)		$ 71,786
e.	E & S Controls (line 6)		$ Not Applicable
f.	Bond maintenance (line 7)		$ Not Applicable
g.	Other (line 8)		$ Not Applicable
		Subtotal	$ 124,346
	CQA/Project Management costs (use 5% of subtotal)		$ 6,217
		Total	**$ 130,563**

(Place this total on Summary Cost Worksheet – line 10)

CALCULATION BRIEF
BONDING WORKSHEET J
BORROW AREA CLOSURE

OBJECTIVE: **Determine the total bond amount required for borrow area closure.**

METHODOLOGY: Estimate borrow area closure costs as required in Pennsylvania Department of Environmental Protection (DEP) Bonding Worksheet J.

REFERENCES: 1. RSMeans, CostWorks Version 16.03, 2019

LINE ITEM ASSUMPTIONS AND CALCULATIONS

MAX Environmental (MAX) is permitted to use the onsite Sewickley Creek borrow area for site soils needs. MAX does not place daily or intermediate cover in Landfill No. 6 and has limited soil needs. The primary use of the borrow area, as it relates to Landfill No. 6, would be for final cover soil. It is assumed that the borrow area will be revegetated during periods of non-use. Therefore, it is conservatively assumed that no more than half of the borrow area will be unvegetated at any one time.

1. The Sewickley Creek Borrow Area is approximately 22 acres.

2. The borrow area will only be used to access final cover soil for the closure of Landfill No. 6. During excavation of this borrow area, ground surface will be graded to promote drainage. In reality, little grading is anticipated. However, a conservative estimate of 0.5 feet of material over half of the borrow area has been assumed to require grading. Therefore approximately 9,000 cubic yards (cy) of material will be regraded.

3. Regrading will be achieved using material remaining in the borrow area. The regrading cost was estimated using Means Costworks.

   Cost To Regrade Slopes = $2.14/cy

   All material necessary for regrading will be taken from material remaining in the open borrow area.

4. Only topsoil will be required in addition to the regrading material for borrow area closure. It was assumed that the topsoil will be obtained from the Sewickley Creek borrow area and will require placement to a depth of 6 inches over half of the open borrow area. This assumption is based on the

historically successful revegetation of disturbed areas without the placement of topsoil at the facility's closed impoundments. The unit cost for hauling and placement is assumed to be the same cost used for Earthen Cap materials used in Worksheet B, Item 8, ($3.70/cy).

Volume of Topsoil = (22 ac * 0.5) * (43,560 sf/ac) * 0.5 ft / (27 cf/cy) = 9,000 cy

5. Revegetation cost is assumed to be the same as the cost used in Worksheet B, Item 12 ($ 3,263/acre).

6. It is assumed that if the Sewickley Creek borrow area is developed, associated erosion and sediment (E&S) controls will have been constructed prior to borrow area development.

7. Bond maintenance cost is not required since the borrow area is onsite.

8. No additional costs are anticipated for borrow area closure.

9. The values for these line items are calculated as instructed in Worksheet J.

REFERENCE NO. 1

RS MEANS UNIT COSTS

MAX Environmental Technologies, Inc.
Landfill No. 6

RSMeans Costworks Unit Prices

Worksheet J

Description	Unit	Bare Material	Bare Labor	Bare Equipment	Bare Total	Total Incl. O&P
Backfill, structural, sandy clay & loam, 300 H.P. dozer, 300' haul, from existing stockpile, excludes compaction	L.C.Y.	$0.00	$0.40	$1.38	$1.78	$2.14

Date Prepared		I.D. Number
MARCH 2020	COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF WASTE MANAGEMENT	301071

BONDING WORKSHEET K
FACILITY MAINTENANCE COSTS

1.	Size of facility	157	acres
2.	Size of waste placement footprint	16	acres
3.	Size of borrow areas on site	22	acres
4.	Size of leachate ponds on site	Not Applicable	acres
5.	Size of sedimentation ponds on site	Not Applicable	acres
6.	Length of stormwater conveyance ditches	3,080	LF
7.	Number of years of site management (30 years + closure period)	31	years
8.	Annual Cost to repair cap and final cover[1]		
	a. Acres (use 1% of line 2)	0.16	acres
	b. Unit cost[2] to repair final cover	1,065	$/acre
	c. Unit cost[2] to repair cap	12,633	$/acre
	d. Unit cost[2] to repair vegetation	3,263	$/acre
	e. Total unit cost (line b + line c + line d)	16,961	$/acre
9.	Annual Cost to repair and maintain E&S facilities[1]		
	a. Channel repair length (use 3% of line 6)	92	LF
	b. Sedimentation pond repair volume (use 20% of line 5)	Not Applicable	acres
	c. Unit cost[2] to repair channels	10.47	$/LF
	d. Unit cost[2] to repair ponds	Not Applicable	$/acre
	e. Total annual cost (line a x line c) + (line b x line d)	963	$/YR
10.	Annual Cost to repair and maintain leachate ponds[1]		
	a. Leachate pond repair volume (use 20% of line 4)	Not Applicable	acres
	b. Unit cost[2] to repair leachate pond(s)	Not Applicable	$/acre
11.	Annual cost to repair and maintain leachate tanks		
	a. Number and size of tanks	2 (combined 1.6 mgal)	
	b. Annual unit cost[1] to maintain tanks	$ 225	
12.	Annual cost to repair fences and gates (attach details)	$ 530	LS

[1] *After the site is stabilized, the Department may allow a reduction in these requirements.*
[2] *Please refer to the instructions. This estimate should reflect unit costs to bring in a contractor to complete the work and should include mobilization, equipment cost, operator costs, material costs and clean-up and inspection costs.*

13. Annual cost to maintain site roads

a.	Length of site roads[2]	7000	LF
b.	Annual length of site roads to be repaired (2% of line 13a)	140	LF
c.	Unit cost to repair roads[1]	3.66	$/LF

14. Cost Summary – Facility Maintenance

a.	Cost to repair cap/cover (line 7 x line 8a x line 8e)	$	84,127
b.	Cost to maintain E&S facilities (line 7 x line 9e)	$	29,853
c.	Cost to maintain leachate ponds (line 7 x line 10a x line 10b)	$	Not Applicable
d.	Cost to maintain leachate tanks (line 7 x line 11a x line 11b)	$	13,950
e.	Cost to repair fences and gates (line 7 x line 12)	$	16,430
f.	Cost to maintain site roads (line 7 x line 13b x line 13c)	$	15,885
	Subtotal	$	160,245

1. Please refer to the instructions. This estimate should reflect unit costs to bring in a contractor to complete the work and should include mobilization, equipment cost, operator costs, material costs and clean-up and inspection costs. Costs not incurred annually should be determine and divided among the years between events. The costs should also include replacements of pumps and meters, electricity used (pumps, heat tracing, etc.) valve replacement and sludge disposal.
2. This should include access to all maintenance and monitoring areas including but not limited to the disposal area, ponds, leachate conveyance system, tanks, discharge locations, gas extraction system wells, gas probes, groundwater monitoring system and surface water monitoring points.

   Adjustment for maintenance, equipment replacement and contingencies, etc. Please note that these are cumulative and you must add all of the percentages that apply to arrive at the final adjustment percentage. The minimum adjustment is 10%.

   a. Add 5% of subtotal if final slopes or benches have been modified from what is specified in 25 PA Code §273.234(f)
   b. Add 5% of subtotal if more than 30 % stormwater channels are unlined
   c. Add 5% of subtotal if the length of site access roads exceeds 5 miles
   d. Add 10% for mowing **(The slopes will be mowed annually)**

      Final adjustment factor: 10 %

   e. Adjustment (subtotal x factor) $ 16,025

Total (subtotal + adjustment) $ 176,270

(Place this total on Summary Cost Worksheet – line 11)

[1] *After the site is stabilized, the Department may allow a reduction in these requirements.*
[2] *Please refer to the instructions. This estimate should reflect unit costs to bring in a contractor to complete the work and should include mobilization, equipment cost, operator costs, material costs and clean-up and inspection costs.*

CALCULATION BRIEF
BONDING WORKSHEET K
FACILITY MAINTENANCE COSTS

OBJECTIVE: **Determine the total bond amount required for facility maintenance.**

METHODOLOGY: Estimate facility maintenance costs at the MAX Environmental Technologies, Inc. – Yukon Facility, as required in Pennsylvania Department of Environmental Protection (DEP) Bonding Worksheet K.

REFERENCES: 1. RSMeans, CostWorks Version 16.03, 2019

LINE ITEM ASSUMPTIONS AND CALCULATIONS

1. The size of the facility is 157 acres.

2. The waste placement footprint for Landfill No. 6 is 16 acres.

3. The size of the borrow area is 22 acres.

4. There are no leachate ponds onsite.

5. There are no sedimentation ponds onsite.

6. The Landfill No. 6 perimeter channel is approximately 3,080 feet in length.

7. The number of years of sampling assumes that the closure of the Yukon Facility will require one year, and that 30 years of post-closure remain, for a total of 31 years.

8a. The value for this line item is calculated as instructed in Worksheet K and is 0.16 acres.

8b. The unit cost to repair the final cover soil assumes that the repair will consist of the placement of 2 feet of final cover material over the entire repair area. The unit costs to load and haul the material from the stockpile will not apply during final cover soil repair, since the soil will simply be removed and then replaced after repair to the cap system is complete. Therefore, the unit rate for final cover soil repair ($0.22/sy) includes only grading costs (see attached Means CostWorks 2019 estimate).

Unit Repair Cost = (1 ac) * (43,560 sf/ac) * (1 sy / 9 sf) * ($0.22/sy) = $1,065/ac

8c. The unit cost to repair the cap assumes 25 percent of the cost to construct the cap. The installed liner costs were taken from the closure cost estimates (Worksheet B). At these rates, the unit cap construction cost is $1.16/sf or $50,530/ac (refer to Line Items 9a, 9b, and 9c on Worksheet B). Therefore, the unit cap repair cost (25 percent of unit construction cost) is estimated as $12,633/acre.

8d. The unit cost to repair vegetation was assumed to be the same as the revegetation cost developed in Worksheet B, Item 12, and is $ 3,263/acre.

8e. The value for this line item is calculated as instructed in Worksheet K.

9a. The value for this line item is calculated as instructed in Worksheet K.

9b. Not Applicable, there are no sedimentation ponds associated with Impoundment No. 6 onsite.

9c. The unit cost to repair channels will include grading and revegetation. Per Reference Number (Ref. No.) 1, the unit cost for grading will be $4.87/sy. The unit cost to repair vegetation was assumed to be the same as the revegetation cost developed in Worksheet B, Item 12, and is $3,263/acre. Assume that perimeter channels are 2 foot deep with a 2:1 sideslope on one side and a 15 percent slope for the other sideslope. Therefore, the cross sectional horizontal length of the channel is 17 feet.

Cost of grading = $4.87/sy = $9.20/lf for a 2-foot deep trench

Cost of vegetation = $3,263/acre = $1.27/lf for a 2-foot deep trench

Unit Repair Cost = $9.20/lf + $1.27/lf

Unit Repair Cost = $10.47/lf

9d. Not Applicable.

9e. The value for this line item is calculated as instructed in Worksheet K.

10. Not Applicable, as there are no leachate ponds at MAX's Yukon Facility.

11. Leachate will be stored in one 400,000-gallon and one 1.2-million gallon aboveground storage tank. Maintenance costs will include sludge removal and disposal. Historically, MAX has cleaned the leachate storage tanks on an approximate 10-year cycle. To be conservative, a 5-year cleaning cycle has been assumed. It is assumed that the sludge will account for approximately 5 percent of

the tank capacity and will be removed using a vacuum truck. Per Ref. No. 1, the unit cost to rent a 2,500-gallon capacity vacuum truck is $501.60 per day. One Class 1 Truck Driver will also be present for three 8-hour days to operate the vacuum truck and transport the sludge to the onsite treatment facility. The wage rate for a Class 1 Truck Driver is $21.93/hour (Worksheet A cost). The unit cost to treat leachate was assumed to be the same as the treatment cost identified in Worksheet I, Item 5, and is $0.00617/gal. Sludge removal costs were calculated as follows:

Sludge Removal = [($501.60 + $21.93 * 24 hrs) + (80,000 gallons * $0.00617/gal)] / 5yr

Total Sludge Removal Cost = $304

Sludge Removal Unit Cost = $304/yr ÷ 2 tanks = $152/yr/tank

Regardless of the calculated cost above, $225 was conservatively assumed for this line item to allow for additional contingencies associated with the sludge removal cost.

12. The annual cost to repair fences assumes that approximately 20 feet of the chain-link fence that encloses the facility will be replaced each year at a unit rate of $26.50/lf (see attached Means CostWorks estimate).

Fence Repair = 20 lf/yr * $26.50/lf

Fence Repair = $530/yr

13a. Length of site roads (7,000 feet) was estimated from the permit drawings.

13b. The value for this line item is calculated as instructed in Worksheet K.

13c. The unit cost to repair roads assumes that a grader will complete 4 passes over the repair area at a unit rate of $525/mile, with a mobilization/demobilization cost of $249/hr (see attached Means CostWorks estimate). Assuming mob/demob can be completed in 2 hour, the annual cost to maintain 140 lf of the site access roads is as follows:

Haul road maintenance = $525/mi * (1 mi / 5,280 ft) + [(2 hr * $249/hr) / 140 lf]

= $3.66/ lf

14. The values for these line items are calculated as instructed in Worksheet K.

REFERENCE NO. 1

RS MEANS UNIT COSTS

MAX Environmental Technologies, Inc.
Landfill No. 6

RSMeans Costworks Unit Prices

Worksheet K

Description	Unit	Bare Material	Bare Labor	Bare Equipment	Bare Total	Total Incl. O&P
Fine grading, slopes, steep, finish grading	S.Y.	$0.00	$0.09	$0.08	$0.17	$0.22
Topsoil placement and grading, loam or topsoil, screened, 4" deep, furnish and place, truck dumped	S.Y.	$3.49	$0.46	$0.31	$4.26	$4.87
Rent vacuum truck, hazardous material, 2500 gallons	Day	$0.00	$0.00	$456.00	$456.00	$501.60
Fence, chain link industrial, galvanized steel, 3 strands barb wire, 2" posts @ 10' OC, 9 ga. wire, 6' high, schedule 40, includes excavation, & concrete	L.F.	$17.80	$3.96	$0.95	$22.71	$26.50
Maintenance grading of roadways, roadway, 4 passes, 3.0 MPH	Mile	$0.00	$204.00	$196.00	$400.00	$525.00
Maintenance grading of roadways, mobilization/demobilization	Hr.	$0.00	$97.00	$93.00	$190.00	$249.00

Date Prepared: MARCH 2020

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

I.D. Number: 301071

BONDING WORKSHEET L
SUMMARY COST WORKSHEET

Cost Summary - Landfills

1.	Decontaminating the Facility	$ 5,163
2.	Capping/Closure	$ 1,272,563
3.	Groundwater Monitoring System	$ 1,083,551
4.	Surface Water Monitoring	$ 108,730
5.	Private Water Supply Monitoring	$ 123,876
6.	Gas Monitoring	$ Not Applicable
7.	Gas Collection and Maintenance	$ Not Applicable
8.	Other Monitoring	$ Not Applicable
9.	Leachate Management	$ 820,007
10.	Borrow Area Closure	$ 130,563
11.	Maintenance Costs	$ 176,270
12.	Other Costs[1] _____	$ Not Applicable
13.	Other Costs[1] _____	$ Not Applicable
Subtotal		$ 3,720,723

Inflation

14.	Inflation rate (projected inflation for the next three years based on the inflation for the prior three years).	~~5.2~~ % 7% per DEP 5-11-2022 correspondence
15.	Inflation cost for facility (subtotal x line 14)	$ ~~193,478~~ $260,450 Graham 5-12-2022

Contingency and administrative fees

16.	Administrative fees (5%) (subtotal x 0.05)	$ 186,036
17.	Project Management (5%) (subtotal x 0.05)	$ 186,036
18.	Contingency fee amount (subtotal x rate of contingency fee from Table 1) (12.5 %)	$ 465,090
Total	(subtotal + line 15 + line 16 + line 17 + 18)	$ ~~4,751,363~~ $4,818,335 Graham 5-12-2022

[1] You should include any costs that would be incurred by the Department, but were not included in these sheets. Provide separate sheets for documentation.

CALCULATION BRIEF
BONDING WORKSHEET L
SUMMARY COST WORKSHEET

OBJECTIVE: **Determine the inflation and contingency rates for Pennsylvania Department of Environmental Protection (DEP) Bonding Worksheet L.**

METHODOLOGY: Use the DEP prescribed methods to determine the inflation and contingency rates.

REFERENCES:

1. Bureau of Economic Analysis, "Table 1.1.9 Implicit Price Deflators for Gross Domestic Product, Last Revised April 26, 2019.

LINE ITEM ASSUMPTIONS AND CALCULATIONS

14. Inflation rates for this project were calculated using the DEP described method. Inflation rates were determined from the following annual Implicit Price Deflator for Gross Domestic Product (see attached table):

Year	Average Annual Implicit Price Deflator for Gross National Product
2015	104.789
2016	105.935
2017	107.948
2018	110.382

$$I.R. = \frac{110.382 - 107.948}{107.948} + \frac{107.948 - 105.935}{105.935} + \frac{105.935 - 104.789}{104.789} = 0.052$$

Rounding off, the inflation rate is 5.2%.

18. Using Table 1: Contingency fee rate contained in the Bonding Worksheet for Municipal/Residual Waste Processing and Disposal Facilities instructions, the total bond cost is below 5 million dollars, therefore, the contingency amount should be calculated using 12.5%.

REFERENCE NO. 1

IMPLICIT PRICE DEFLATORS FOR GROSS DOMESTIC PRODUCT

Bureau of Economic Analysis

Table 1.1.9. Implicit Price Deflators for Gross Domestic Product

[Index numbers, 2012=100]

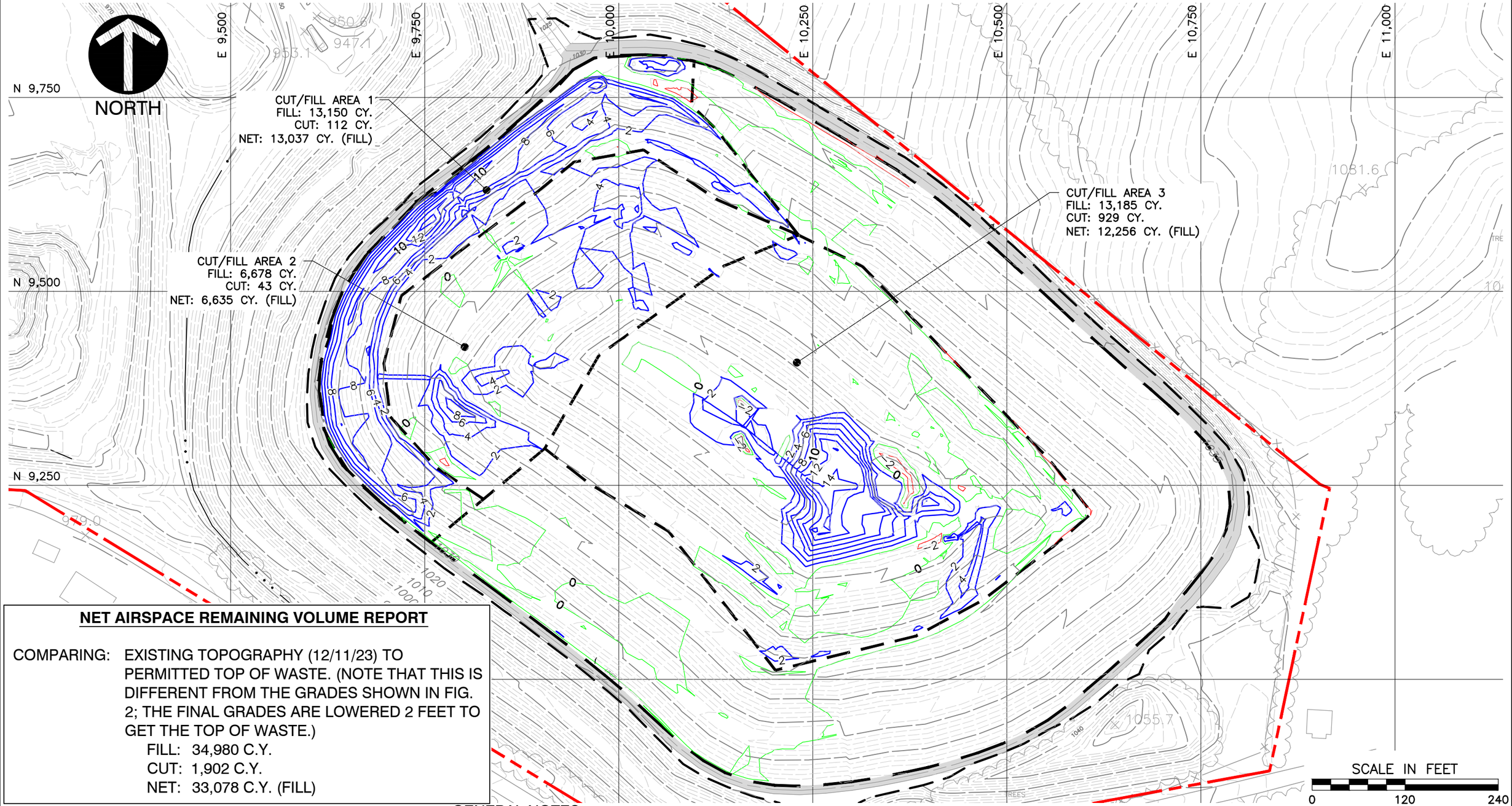
Last Revised on: April 26, 2019 - Next Release Date May 30, 2019

Line		2014	2015	2016	2017	2018
Line						
1	**Gross domestic product**	103.680	104.789	105.935	107.948	110.382
2	**Personal consumption expenditures**	102.868	103.126	104.235	106.073	108.232
3	Goods	98.939	95.889	94.340	94.632	95.280
4	Durable goods	95.496	93.365	91.183	89.136	87.651
5	Nondurable goods	100.595	97.079	95.867	97.437	99.298
6	Services	104.852	106.823	109.325	111.984	114.958
7	**Gross private domestic investment**	102.959	103.873	103.914	105.360	107.822
8	Fixed investment	103.250	104.217	104.357	105.939	108.215
9	Nonresidential	101.565	102.081	101.282	101.962	103.150
10	Structures	107.475	109.852	110.296	113.120	117.249
11	Equipment	99.282	98.743	97.738	97.183	97.202
12	Intellectual property products	100.734	101.516	100.208	101.294	102.358
13	Residential	111.106	114.100	118.185	123.495	130.422
14	Change in private inventories	---	---	---	---	---
15	**Net exports of goods and services**	---	---	---	---	---
16	Exports	100.169	95.146	93.248	95.923	99.389
17	Goods	98.323	91.276	87.822	90.490	93.772
18	Services	104.336	103.838	105.395	108.084	111.959
19	Imports	97.777	89.728	86.530	88.511	91.258
20	Goods	96.715	87.464	83.768	85.761	88.316
21	Services	103.196	101.498	100.918	102.835	106.572
22	**Government consumption expenditures and gross investment**	104.445	104.717	105.059	107.797	110.851
23	Federal	102.618	103.200	103.737	105.753	107.524
24	National defense	101.995	102.256	102.557	104.209	105.536
25	Nondefense	103.656	104.739	105.631	108.188	110.620
26	State and local	105.670	105.748	105.970	109.155	113.012
	Addendum:					
27	Gross national product	103.667	104.755	105.903	107.903	110.308

ATTACHMENT 1

EXISTING GROUND SURFACE AS OF 12/11/2023

APPROVED DAILY COVER



NET AIRSPACE REMAINING VOLUME REPORT

COMPARING: EXISTING TOPOGRAPHY (12/11/23) TO PERMITTED TOP OF WASTE. (NOTE THAT THIS IS DIFFERENT FROM THE GRADES SHOWN IN FIG. 2; THE FINAL GRADES ARE LOWERED 2 FEET TO GET THE TOP OF WASTE.)

FILL: 34,980 C.Y.
CUT: 1,902 C.Y.
NET: 33,078 C.Y. (FILL)

LEGEND

- –5 — ISOPACH CUT CONTOUR
- 0 — ISOPACH ZERO CONTOUR
- 10 — ISOPACH FILL CONTOUR
- 1070 — EXISTING CONTOUR
- PERMIT BOUNDARY
- LANDFILL NO. 6 ACCESS ROAD

GENERAL NOTES

1. TOP OF WASTE GRADES ARE 2.0–FEET BELOW PERMITTED FINAL GRADES. THIS ASSUMES THE SUPPORT ZONE MATERIALS PLACED BELOW THE CAP GEOSYNTHETICS WILL BE WASTE.
2. COORDINATES SHOWN ON THIS PAGE ARE IN THE SITE'S LOCAL COORDINATE SYSTEM.

REFERENCE

1. TOPOGRAPHIC SURVEY CONDUCTED BY CIVIL & ENVIRONMENTAL CONSULTANTS, INC. DECEMBER 11, 2023.

Civil & Environmental Consultants, Inc.
4350 Northern Pike · Suite 141 · Monroeville, PA 15146
724-327-5200 · 800-899-3610
www.cecinc.com *HAND SIGNATURE ON FILE

MAX ENVIRONMENTAL TECHNOLOGIES, INC.
YUKON FACILITY
LANDFILL. NO. 6 AIRSPACE CALCULATION
YUKON, PENNSYLVANIA
CUT/FILL ISOPACH
12/11/23 TOPO VS. PERMITTED TOP OF WASTE

DRAWN BY:	SCC	CHECKED BY:	ZLM	APPROVED BY:	TDM*
DATE:	DECEMBER 2023	DWG SCALE:	1"= 120'	PROJECT NO:	170-822

FIGURE NO.: 3

P:\2017\170-822\-CADD\Dwg\SW65\170822-SW65-FIGURE-3.dwg[3] LS:(12/19/2023 - scoil) - LP: 12/20/2023 12:24 PM

Approved Daily Cover

ADC	Date Approved	GIS	Waste Type & Code(s)	Total Tons Used
McConway & Torely	9/23/15	6100Y	Foundry Sand – RWC 101	0
McConway & Torely	9/23/15	6100Y	Slag – RWC 102	0
Revere Smelting	9/23/15	5675	Slag – RWC 102	0
Clarios	2/22/16	6064	Slag – RWC 102	0
Apex Energy, LLC	10/6/21	6466	Drill Cuttings – RWC 810	0