



NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF ENVIRONMENTAL REMEDIATION
Site Classification Report



DATE: 1/27/2014

Site Code: 837003	Site Name: McKenna Landfill
City: ALBION	Town: Albion
Region: 8	County: Orleans
Current Classification: 02	Proposed Classification: 04
Estimated Size (acres): 15.00	Disposal Area: Landfill
Significant Threat: Previously	Site Type:
Priority ranking Score: 130	Project Manager: Will Welling

Summary of Approvals

Originator/Supervisor: Susan Edwards	10/24/2013
RHWRE: Bart Putzig:	12/11/2013
BEEI of NYSDOH:	12/20/2013
CO Bureau Director: Michael Cruden, Director, Remedial Bureau E:	12/11/2013
Assistant Division Director: Michael J. Ryan, P.E.:	12/23/2013

Basis for Classification Change

Hazardous waste disposal at this site was addressed by implementation of the remedy identified for the site by the Record of Decision (ROD). All construction of the components of the site-wide remedy was completed no later than 2002. The Final Engineering Report(s) (FER) (or its equivalent) confirms that the remedy has been constructed consistent with the requirements in the ROD. The FER is in edocs. Management of contamination remaining at the site, including any required monitoring, is and has been controlled pursuant to a Site Management Plan (SMP). A copy of the SMP (or its equivalent) is in edocs. Institutional controls are required to ensure the protectiveness of the site. The required control, in the form of an Environmental Notice, is presently in place. A significant threat to public health and the environment no longer exists at the site. The site is properly remediated and requires site management, therefore, it qualifies for Class 4 status on the Registry of Inactive Hazardous Waste disposal sites. The remaining contamination does not appear to constitute a significant threat to public health or the environment based on remedial efforts performed to date.

Site Description - Last Review: 12/09/2013

Location: The McKenna Landfill Site is located on the north side of the former Yager Road, west of Transit Road in the Town of Albion, Orleans County, New York.

Site Features: The landfill occupies approximately 15 acres of the 20 acre site. The landfill is located adjacent to the northeast corner of the closed and capped Orleans Sanitary Landfill (OSL). The McKenna Landfill Site



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is bounded by the New York State Barge Canal to the north, Transit Road to the east, the former Yager Road to the south and an undeveloped portion of the OSL to the west. The setting is rural with a few residences within a half mile of the site.

Current Zoning/Use(s): The site is presently located in an area zoned A/R (Agricultural/Residential). It is also located in the area zoned C (Canal Overlay zone), being directly adjacent to the former Erie Canal. The site setting is generally rural/agricultural in nature with some sparsely located residences within a one-half mile radius of the site. The site may not be used for agricultural purposes and no redevelopment of the site is presently allowed within the constraints of the site remedy.

Historical Use(s): The McKenna Landfill Site is a closed municipal landfill owned by a private party, but operated for a period by Orleans County. The landfill was operated by Mr. Alan J. McKenna from 1969 to 1983 and received municipal refuse from several townships and industrial wastes from several companies. The industrial wastes were reported to include vinyl chloride from Bayex, paint sludge and spent cleaning solvent from Fisher Price Toys, and tetrachloroethylene from Aurora Cleaners. A Community Right to Know (RTK) survey form documented the disposal of spent cleaning solvents, specifically trichloroethene (TCE) at the landfill. The landfill was closed in the early 1980s, but the closure was not properly completed. During the final stages of closure in September 1983, the NYSDEC and the Orleans County Health Department inspected and sampled the site.

Prior to the closing of the landfill in 1983, the landfill had been cited for numerous operational violations of regulations regarding Solid Waste Management Facilities, New York Code of Rules and Regulations, Title 6 (6NYCRR), Part 360. These violations included open burning, uncovered refuse, refuse protruding through the cover, uncontrolled leachate seeps, methane gas leaking from landfilled areas in concentrations exceeding the lower explosive limit and leachate seeping off site. In 1983 the NYSDEC executed an Order on Consent with the site owner, Mr. McKenna, requiring proper closure and post closure maintenance of the site.

In an attempt to control the methane gas release problem, six methane gas vents were installed by the site owner into the landfill in 1984. The owner also installed a leachate collection system along the northern edge of the landfill in an attempt to address a leachate migration problem. This system was extended along the western perimeter and a portion of the southern perimeter of the site in 1987. Leachate was pumped from this system into tankers and taken to the Albion Wastewater Treatment facility for disposal. Since construction of the leachate system, the site owner did not regularly pump leachate as needed. Further, it was determined that the constructed collection system was not properly installed. As such, significant leachate problems continued. Additionally, the gas venting system at the site was deemed inadequate, because so few vents were installed. During the final stages of closure in September 1983, the NYSDEC and the Orleans County Health Department inspected and sampled the site. A Phase I investigation was completed in August 1985 and a Phase II investigation was completed in July 1990. Groundwater sampling performed during the Phase II study revealed the presence of contaminants at levels exceeding 6 NYCRR Part 703 groundwater quality standards and guidance values.

A ROD for presumptive landfill closure was signed in March 1995 and an order on consent was signed in March 1998. Chemical Waste Management, one of the potentially responsible parties (PRPs), undertook closure of the landfill. Landfill closure began in May 2000, and was completed in September of 2001. This



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order on consent only stipulated construction of the landfill cap and did not include the operation and maintenance of the landfill after the closure was completed. The NYSDEC took over the OM&M of the site at the time of construction completion.

Site Geology and Hydrogeology: The overburden at the site has been identified as glacial till. This till is composed of sand and silt, with small amounts of clay and gravel. The thickness of the overburden varies from 0 to 10 feet. The upper most bedrock unit underlying the site is the Grimsby Sandstone formation. This bedrock is nearly flat-lying and dips slightly to the south at approximately 1/2 degree. In the vicinity of the site, the erosional surface of the bedrock slopes to the north. In the area of the site the Grimsby formation is approximately 60 to 75 feet thick. The Queenston Shale underlies the Grimsby formation. The Queenston formation consists mostly of brick-red, sandy shale and thin beds of greenish-gray shale and greenish-gray sandstone. The formation is approximately 1,200 feet thick. Groundwater within the Queenston formation near the site was analyzed and found to be brackish to saline, with high concentrations of chloride and sodium.

Generally, groundwater in the area of the site flows north toward Lake Ontario. Locally, bedrock groundwater at the site flows toward the north. Further, there is also a downward vertical gradient present in the groundwater at the site. Groundwater occurs under unconfined or water table conditions within both the overburden and bedrock formations and the levels are generally within 1 to 2 feet of ground surface. Groundwater is transmitted through the overburden material and through the bedding plane partings and fractures of the Grimsby formation. The hydraulic conductivity of the Grimsby formation is generally low, approximately 7 x 10⁻¹⁰ cm/sec. Water level data indicates that the adjacent section of the Erie Canal changes from a potential recharge condition when flooded to a discharge condition when drained, relative to the adjacent overburden and top of rock flow zones. The canal was constructed with low permeability bottom and sides and does have an effect on overburden groundwater flow by presenting a physical barrier to flow. However, the canal does not appear to have a major effect on groundwater flow within the bedrock.

Contaminants of Concern (Including Materials Disposed)	Quantity Disposed
OU 01	
TRICHLOROETHENE (TCE)	0.00
INCLUDED POLYVINYL ALCOHOL, POLYVINYL CHLORIDE, AND RUBBER LATEX.	0.00
INDUSTRIAL WASTE FROM THE A&P CO. INCLUDED:	0.00
SODIUM SULFATE, SODIUM TRI-DECYLEZENE SULFATE	0.00
TRICHLOROETHYLENE (TCE)	0.00
PVC	0.00

Analytical Data Available for : Air, Groundwater, Surface Water, Soil, Sediment

Applicable Standards Exceeded for: Groundwater, Surface Water, Drinking Water, Soil

Site Environmental Assessment- Last Review: 12/09/2013

Prior to remediation:

Groundwater: Analyses of samples from three wells installed at the overburden/bedrock interface, immediately adjacent to the site, determined the presence of several organic compounds above NYSDEC groundwater standards, including chlorobenzene, ethylbenzene, total xylenes and 1,2,4 trichlorobenzene. Detection of inorganic elements above groundwater standards included arsenic, iron, barium, lead, and manganese.



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Three well nests (i.e. wells in the overburden and bedrock formations) were installed north of the canal. Analyses of samples from the bedrock wells did not detect any organic compounds above the groundwater standards, except for 4 methylphenol (18 ug/l in RI-2TR and RI-3TR). Also, delta BHC and Endosulfan I were detected in wells RI-1TR and RI-3TR at concentrations less than 1 ug/l (part per billion). Concentrations of most inorganic compounds from these wells were consistent with background levels; however, the levels of aluminum, barium and iron did appear to be elevated above expected background levels.

Analysis of overburden wells at these nests found no contaminants above background levels north of the canal. The canal acts as a barrier to overburden groundwater migration from this site. In addition, samples obtained from domestic wells north and east of the canal did not detect any compounds above NYSDOH Drinking Water Standards. Based on these results migration of compounds from the site beyond the canal, through the bedrock formation, has not occurred.

Surface Water: Two surface water samples were taken in the canal, when it the water level was lowered, near the eastern and western ends of the site. Concentrations of inorganic compounds, including aluminum, iron, and lead exceeded NYSDEC Surface Water Quality Standards for Class C waters. Tetrachloroethylene was detected in each sample at a concentration slightly above the water quality standard.

Sediment: Sediment samples were taken from four locations at the site: three from a ditch between the site and the canal and one from a pond adjacent to the northeast corner of the site. The samples from the ditch are in an area where leachate seeps are found and that could have affected the sediments. Volatile organic compounds (such as benzene, ethylbenzene, total xylenes and acetone) were found at low levels in these sediments. Semi-volatile compounds (such as butylbenzylphthalate, heptachlor epoxide and di-n-butylphthalate) were detected at higher concentrations in these samples.

Concentrations of inorganic elements did not exceed those found in typical non-contaminated soils. Results from the pond sediment sample contained acetone (13 ppb), methylene chloride (6 ppb), and di-n-butylphthalate (4,400 ppb). Concentrations of inorganic elements did not exceed those found in typical non-contaminated soils.

Leachate: Leachate was seeping from the landfill and was observed on numerous occasions seeping from the north side of the site. Trace concentrations of organic compounds, including 1,4-dichlorobenzene and 2,4-dimethylphenol, were detected in leachate samples taken. Several inorganic elements, including aluminum, iron, lead, cobalt, and zinc, were also detected in the samples. Leachate staining (i.e., an orange color in the sediments) has been observed on the bottom of the Erie Barge Canal when it is drained. Samples taken by the NYSDEC in April 1993 from stained areas on the canal bottom found elevated levels of aluminum (up to 10,000 parts per million (ppm), iron (up to 40,600 ppm), lead (up to 111 ppm), and zinc (up to 415 ppm). These results are indicative of leachate migration towards the canal when it is drained.

Post-Remediation: The landfill has been properly capped and potential exposures to waste have been eliminated. The cap also minimizes the infiltration of surface (rain) water into the waste mass. Operation and maintenance activities at the McKenna Landfill Site were initiated in March 2002, and continue through the present. Operation and maintenance activities have included, or presently include, leachate removal and



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disposal (suspended in June 2013 as DEC determined this was not necessary), periodic site inspections, leachate sampling, groundwater, and surface water sampling, mowing and cap repairs, maintenance of site access roads, and report preparation. Groundwater sampling is continuing and confirms that some contaminants in excess of Part 703 standards still remain, however monitoring on the north side of the canal reveals no contamination migration.

Site Health Assessment - Last Update: 12/05/2013

People are not expected to come into direct contact with site-related contaminants because the landfill is fenced, capped, and pavement covers much of the adjacent area. People may come into direct contact with contaminants if they dig below the surface. People are not drinking contaminated groundwater associated with the site because sampling has demonstrated that private wells have not been affected.

	Start		End	
OU 00				
OGC Docket - Deed Restriction	9/20/12	ACT	4/22/13	ACT
Periodic Review	5/16/07	ACT	6/30/07	ACT
Periodic Review	3/10/09	ACT	3/29/10	ACT
Periodic Review	1/1/11	ACT	1/1/11	ACT
Periodic Review	3/30/12	ACT	6/4/12	ACT
Periodic Review	2/11/13	ACT	4/11/13	ACT
Periodic Review	1/30/14	PLN	3/16/14	PLN
Reclass Pkg.	10/24/13	ACT	3/15/14	PLN
Remedial System Optimization - Site Management	10/15/12	ACT	5/13/13	ACT
Site Management	4/1/02	ACT	4/29/76	PLN
OU 01				
OGC Docket - Environmental Notice	3/15/10	ACT	8/16/13	ACT
Remedial Action	5/1/00	ACT	12/4/01	ACT
Remedial Design	3/1/98	ACT	2/15/00	ACT
Remedial Investigation	5/1/94	ACT	3/1/95	ACT
Site Characterization	5/1/88	ACT	7/1/90	ACT
VI Evaluation	9/30/08	ACT	6/6/10	ANF

Remedy Description and Cost

Remedy Description for Operable Unit 01

The implemented remedy included the following:

- a low permeability landfill cap in conformance with 6 NYCRR Part 360 requirements for landfill closure;
- a passive landfill gas venting system;
- surface drainage improvements to promote positive conveyance of runoff;



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- perimeter leachate/groundwater collection system piping, connections to existing system and wetwell
- collection manholes and tankage as needed;
- leachate/groundwater collection, transportation and treatment/disposal;
- a long term monitoring program to evaluate the effectiveness of the remedy.

Total Cost \$5,745,548

OU 00 Site Management Plan Approval: 04/01/2002 Status: ACT



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**NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Site Management Form
1/27/2014**

SITE DESCRIPTION

SITE NO. 837003

SITE NAME McKenna Landfill

SITE ADDRESS: North of Yager Road **ZIP CODE:** 14411

CITY/TOWN: Albion

COUNTY: Orleans

ALLOWABLE USE: Closed Landfill

SITE MANAGEMENT DESCRIPTION

SITE MANAGEMENT PLAN INCLUDES:	YES	NO
IC/EC Certification Plan	}	G
Monitoring Plan	}	G
Operation and Maintenance (O&M) Plan	}	G
Periodic Review Frequency: once a year	}	G
Periodic Review Report Submittal Date: 01/30/2014		



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Site Classification Report



DATE: 1/27/2014

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Site Name: McKenna Landfill

Description of Institutional Control

Joan Klafehn (estate of Alan J. Mckenna)

3856 Lake Road

YAGER RD

Environmental Notice

Block: 000

Lot: 004

Sublot: 001

Section: 074

Subsection: 000

S_B_L Image: 74.-2-4.1

Ground Water Use Restriction

IC/EC Plan

Landuse Restriction

Monitoring Plan

O&M Plan

Site Management Plan

Soil Management Plan

Description of Engineering Control

Joan Klafehn (estate of Alan J. Mckenna)

3856 Lake Road

YAGER RD

Environmental Notice - Institutional Control Instrument

Block: 000

Lot: 004

Sublot: 001

Section: 074

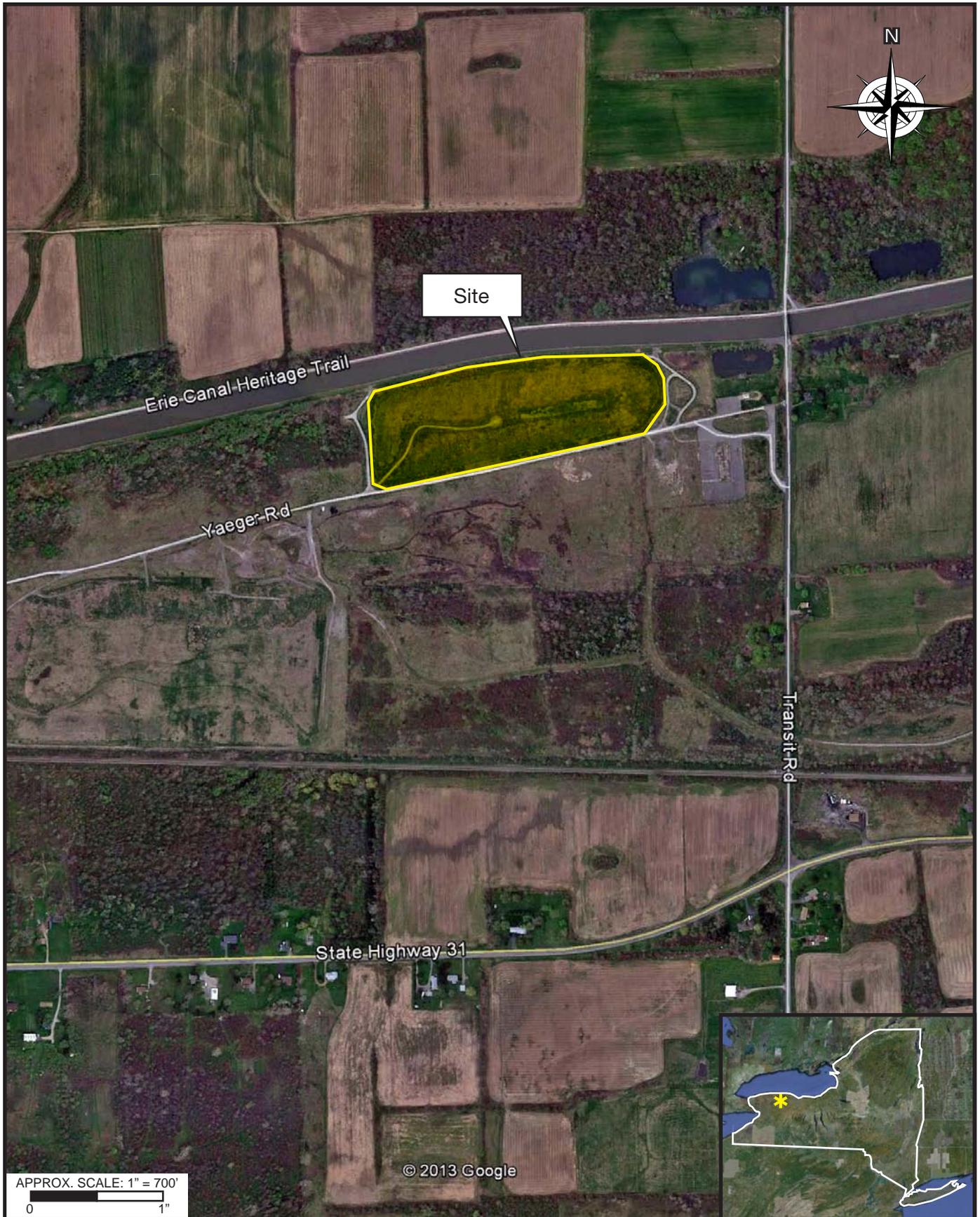
Subsection: 000

S_B_L Image: 74.-2-4.1

Cover System

Leachate Collection

Subsurface Barriers





PUBLIC NOTICE

State Superfund Program

Receive Site Information by Email. See next page to Learn How.

Site Name: McKenna Landfill

January 27, 2014

Site No. 837003 **Tax Map No.** 74-2-4.1

Site Location: North side of the former Yaeger Road (west of Transit Road), Town of Albion, 14411

Inactive Hazardous Waste Disposal Site Classification Notice

The Inactive Hazardous Waste Disposal Site Program (the State Superfund Program) is the State's program for identifying, investigating, and cleaning up sites where the disposal of hazardous waste may present a threat to public health and/or the environment. The New York State Department of Environmental Conservation (NYSDEC) maintains a list of these sites in the Registry of Inactive Hazardous Waste Disposal Sites (the "Registry"). The site identified above, and located on a map on the reverse side of this page, was recently reclassified on the Registry as a Class 4 site as it no longer presents a significant threat to public health and/or the environment for the following reason(s):

- **Soil:** A cap has been constructed in accordance with 6 NYCRR Part 360 requirements for landfill closure. Access to the site is restricted.
- **Groundwater:** Groundwater use at the site, without the necessary water quality treatment, is restricted.
- **Soil Vapor:** Operation, maintenance, and monitoring activities include a requirement to notify the NYSDEC in the event that a change of use is planned, i.e., placing a building on the site.

Based on the above, the site has been reclassified to Class 4 (requires continued site management).

The site lies adjacent to the Erie Canal on the south side. Because it is a closed landfill, waste remains in place. A low permeability cap covers the waste to slow the infiltration of rain water. The cap was graded to allow runoff surface water to flow to a collection ditch on the northern side of the site. A passive gas collection system prevents the buildup of methane gas. A leachate collection system built into the construction of the landfill cap has allowed the waste mass to adequately drain. A Site Management Plan (SMP) with a long-term groundwater monitoring program is in place and being followed. The SMP references an Environmental Notice (EN) which has been filed with Orleans County and is attached to the deed for the landfill property. The purpose of the EN is to minimize human exposures to the residual, buried contamination.

If you own property adjacent to this site and are renting or leasing your property to someone else, please share this information with them. If you no longer wish to be on the contact list for this site or otherwise need to correct our records, please contact NYSDEC's Project Manager listed below.

FOR MORE SITE INFORMATION

Additional information about this site can be found using NYSDEC's "Environmental Site Remediation Database Search" engine which is located on the internet at: www.dec.ny.gov/cfm/xtapps/derexternal/index.cfm?pageid=3

Comments and questions are always welcome and should be directed as follows:

Project Related Questions

William B. Welling, Project Manager
NYS Department of Env. Conservation
Remedial Bureau E, 12th Floor
625 Broadway
Albany, NY 12233-7017
Email: wbellin@gw.dec.state.ny.us
Phone: 518-402-9813

Approximate Site Location

McKenna Landfill

Site ID: 837003

North side of the former Yaeger Road (west of Transit Road)

Town of Albion, Orleans County 14411



Receive Site Updates by Email

Have site information such as this public notice sent right to your email inbox. NYSDEC invites you to sign up with one or more contaminated sites county email listservs available at the following web page: www.dec.ny.gov/chemical/61092.html . It's *quick*, it's *free*, and it will help keep you *better informed*.



As a listserv member, you will periodically receive site-related information/announcements for all contaminated sites in the county(ies) you select.

You may continue also to receive paper copies of site information for a time after you sign up with a county listserv, until the transition to electronic distribution is complete.

Note: Please disregard if you received this notice by way of a county email listserv.

Electronic copies:

R. Schick, Director, Division of Environmental Remediation
A. English, Director, Bureau of Technical Support
K. Lewandowski, Chief, Site Control Section
M. Cruden, Director, Remedial Bureau E
B. Putzig, RHWRE, Region 8
S. Sheeley, Regional Permit Administrator, Region 8
L. Vera, Regional CPS, Region 8
K. Anders, NYSDOH
L. Ennist, DER, Bureau of Program Management
W. Welling, Project Manager
B. Anderson, Site Control Section

Estate of Alan McKenna
Attn. Joan Klafehn
3856 Lake Rd
Brockport, NY 14420

Irene Smith
11316 Main St
Clarence, NY 14031

Irene Smith
11414 Main St
Clarence, NY 14031

Barbara Ludington or Current Occupant
3445 Transit Rd
Albion, NY 14411

Craig Discher or Current Occupant
3440 Transit Rd
Albion, NY 14411

New York State Canal Div
141 N Liberty St
Albion, NY 14411

Dennis & Wendy Kirby or
Current Occupant
3440 Densmore Rd
Albion, NY 14411

Orleans Sanitary Landfill, Inc
11267 Clarence Center Rd
Albion, NY 14001

Supervisor Matthew Passarell
Town of Albion
3665 Clarendon Road
Albion, NY 14411

Julie Andrews, Chairperson
Town of Albion Planning Board
3665 Clarendon Road
Albion, NY 14411

Hugh Dudley, Chairperson
Town of Albion Zoning Board
3665 Clarendon Road
Albion, NY 14411

Superintendent Jed P. Standish
Town of Albion Highway and Water Dept
Town of Albion Albion Admin Offices
3665 Clarendon Road
Albion, NY 14411

Kevin Miller, Chief Operator Albion
Water Treatment Plant
Town of Carlton Administrative Offices
14341 Waterport-Carlton Road
Albion, NY 14411

Kim Remley, Chair
Stop Polluting Orleans County, Inc.
54 Meadowbrook Drive
Albion, NY 14411

Dean A. Theodorakos, Mayor
Village of Albion
37 E Bank St, Albion, NY
Albion, NY 14411

David B. Callard, Chairman
Orleans County Legislature
Courthouse Square
3 South Main Street
Albion, NY 14411

Wayne Hale, Jr., Director
Orleans County Planning and Dev.
14016 Route 31 West
Albion, NY 14411



Joe Martens
Commissioner

January 6, 2014

Ms. Joan Klafehn
Estate of Alan J. McKenna
3856 Lake Road
Brockport, NY 14420

Dear Ms. Klafehn:

As mandated by Section 27-1305 of the Environmental Conservation Law (ECL), the New York State Department of Environmental Conservation (Department) must maintain a Registry of all inactive disposal sites suspected or known to contain hazardous waste. The ECL also mandates that this Department notify the owner of all or any part of each site or area included in the Registry of Inactive Hazardous Waste Disposal Sites as to changes in site classification.

Our records indicate that you are the owner or part owner of the site listed below. Therefore, this letter constitutes notification of change in the classification of such site in the Registry of Inactive Hazardous Waste Disposal Sites in New York State. The effective date of the classification change shall be 20 days from the date of this letter.

DEC Site No.: 837003

Site Name: McKenna Landfill

Site Address: North of Yager Road, Albion, Orleans County, NY 14411

Classification Change: Class 2 to Class 4

The reason for the change is as follows:

Remedial actions have been completed at the site and there is residual contamination remaining in soil and groundwater. The site is subject to an Environmental Notice that minimizes human exposures to this residual contamination by implementing the following measures:

- **Soil:** A cap has been constructed in accordance with 6 NYCRR Part 360 requirements for landfill closure. Access to the site is restricted.
- **Groundwater:** Groundwater use at the site, without the necessary water quality treatment, is restricted.
- **Soil Vapor:** Operation, maintenance, and monitoring activities include a requirement to notify the NYSDEC in the event that a change of use is planned.

Enclosed is a copy of the Department's Inactive Hazardous Waste Disposal Site Report form as it will appear in the Registry. An explanation of the site classifications is available at <http://www.dec.ny.gov/chemical/8663.html>. The Law allows the owner and/or operator of a site listed in the Registry to petition the Commissioner of the New York State Department of Environmental Conservation for deletion of such site, modification of site classification, or modification of any information regarding such site, by submitting a written statement setting forth the grounds of the petition.

Such petition may be addressed to:

Honorable Joseph J. Martens
Commissioner
New York State Department of Environmental Conservation
625 Broadway
Albany, New York 12233-1010

For additional information, please contact William Welling, the project manager at 518-402-9813.

Sincerely,



Kelly A. Lewandowski, P.E.
Chief
Site Control Section

KAL/BA/sls
Enclosure

ec: R. Schick
L. Zeppetelli
A. English
K. Lewandowski
W. Welling, Project Manager



**NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF ENVIRONMENTAL REMEDIATION
Inactive Hazardous Waste Disposal Report**



Site Code	837003				
Site Name	McKenna Landfill	Address	North of Yager Road		
Classification	04	City	ALBION	Zip	14411
Region	8	County	Orleans	Town	Albion
Latitude	43 degrees, 15 minutes, 2.18 seconds			Estimated Size	15.00 acres
Longitude	-78 degrees, 7 minutes, 17.00 seconds				
Site Type		Disposal Area	Landfill		

Site Description

Location: The McKenna Landfill Site is located on the north side of the former Yager Road, west of Transit Road in the Town of Albion, Orleans County, New York.

Site Features: The landfill occupies approximately 15 acres of the 20 acre site. The landfill is located adjacent to the northeast corner of the closed and capped Orleans Sanitary Landfill (OSL). The McKenna Landfill Site is bounded by the New York State Barge Canal to the north, Transit Road to the east, the former Yager Road to the south and an undeveloped portion of the OSL to the west. The setting is rural with a few residences within a half mile of the site.

Current Zoning/Use(s): The site is presently located in an area zoned A/R (Agricultural/Residential). It is also located in the area zoned C (Canal Overlay zone), being directly adjacent to the former Erie Canal. The site setting is generally rural/agricultural in nature with some sparsely located residences within a one-half mile radius of the site. The site may not be used for agricultural purposes and no redevelopment of the site is presently allowed within the constraints of the site remedy.

Historical Use(s): The McKenna Landfill Site is a closed municipal landfill owned by a private party, but operated for a period by Orleans County. The landfill was operated by Mr. Alan J. McKenna from 1969 to 1983 and received municipal refuse from several townships and industrial wastes from several companies. The industrial wastes were reported to include vinyl chloride from Bayex, paint sludge and spent cleaning solvent from Fisher Price Toys, and tetrachloroethylene from Aurora Cleaners. A Community Right to Know (RTK) survey form documented the disposal of spent cleaning solvents, specifically trichloroethene (TCE) at the landfill. The landfill was closed in the early 1980s, but the closure was not properly completed. During the final stages of closure in September 1983, the NYSDEC and the Orleans County Health Department inspected and sampled the site.

Prior to the closing of the landfill in 1983, the landfill had been cited for numerous operational violations of regulations regarding Solid Waste Management Facilities, New York Code of Rules and Regulations, Title 6 (6NYCRR), Part 360. These violations included open burning, uncovered refuse, refuse protruding through the cover, uncontrolled leachate seeps, methane gas leaking from landfilled areas in concentrations exceeding the lower explosive limit and leachate seeping off site. In 1983 the NYSDEC executed an Order on Consent with the site owner, Mr. McKenna, requiring proper closure and post closure maintenance of the site.

In an attempt to control the methane gas release problem, six methane gas vents were installed by the site owner into the landfill in 1984. The owner also installed a leachate collection system along the northern edge of the landfill in an attempt to address a leachate migration problem. This system was extended along the western perimeter and a portion of the southern perimeter of the site in 1987. Leachate was pumped from this system into tankers and taken to the Albion Wastewater Treatment facility for disposal. Since construction of the leachate system, the site owner did not regularly pump leachate as needed. Further, it was determined that the constructed collection system was not properly installed. As such, significant leachate problems continued. Additionally, the gas venting system at the site was deemed inadequate, because so few vents were installed. During the final stages of closure in September 1983, the NYSDEC and the Orleans County Health Department inspected and sampled the site. A Phase I investigation was completed in August 1985 and a Phase II investigation was completed in July 1990. Groundwater sampling performed during the Phase II study revealed the presence of contaminants at levels exceeding 6 NYCRR Part 703 groundwater quality standards and guidance values.

A ROD for presumptive landfill closure was signed in March 1995 and an order on consent was signed in March 1998. Chemical Waste Management, one of the potentially responsible parties (PRPs), undertook closure of the landfill. Landfill closure began in May 2000, and was completed in September of 2001. This order on consent only stipulated construction of the landfill cap and did not include the operation and maintenance of the landfill after the closure was completed. The NYSDEC took over the OM&M of the site at the time of construction completion.

01/06/2014

Site Geology and Hydrogeology: The overburden at the site has been identified as glacial till. This till is composed of sand and silt, with small amounts of clay and gravel. The thickness of the overburden varies from 0 to 10 feet. The upper most bedrock unit underlying the site is the Grimsby Sandstone formation. This bedrock is nearly flat-lying and dips slightly to the south at approximately 1/2 degree. In the vicinity of the site, the erosional surface of the bedrock slopes to the north. In the area of the site the Grimsby formation is approximately 60 to 75 feet thick. The Queenston Shale underlies the Grimsby formation. The Queenston formation consists mostly of brick-red, sandy shale and thin beds of greenish-gray shale and greenish-gray sandstone. The formation is approximately 1,200 feet thick. Groundwater within the Queenston formation near the site was analyzed and found to be brackish to saline, with high concentrations of chloride and sodium.

Generally, groundwater in the area of the site flows north toward Lake Ontario. Locally, bedrock groundwater at the site flows toward the north. Further, there is also a downward vertical gradient present in the groundwater at the site. Groundwater occurs under unconfined or water table conditions within both the overburden and bedrock formations and the levels are generally within 1 to 2 feet of ground surface. Groundwater is transmitted through the overburden material and through the bedding plane partings and fractures of the Grimsby formation. The hydraulic conductivity of the Grimsby formation is generally low, approximately 7 x 10⁻¹⁰ cm/sec. Water level data indicates that the adjacent section of the Erie Canal changes from a potential recharge condition when flooded to a discharge condition when drained, relative to the adjacent overburden and top of rock flow zones. The canal was constructed with low permeability bottom and sides and does have an effect on overburden groundwater flow by presenting a physical barrier to flow. However, the canal does not appear to have a major effect on groundwater flow within the bedrock.

Contaminants of Concern (Including Materials Disposed)	Quantity
OU 01	
TRICHLOROETHENE (TCE)	0.00
INCLUDED POLYVINYL ALCOHOL, POLYVINYL CHLORIDE, AND RUBBER LATEX.	0.00
INDUSTRIAL WASTE FROM THE A&P CO. INCLUDED:	0.00
SODIUM SULFATE, SODIUM TRI-DECYLEZENE SULFATE	0.00
TRICHLOROETHYLENE (TCE)	0.00
PVC	0.00

Analytical Data Available for : Air, Groundwater, Surface Water, Soil, Sediment

Applicable Standards Exceeded for: Groundwater, Surface Water, Drinking Water, Soil

Site Environmental Assessment

Prior to remediation:

Groundwater: Analyses of samples from three wells installed at the overburden/bedrock interface, immediately adjacent to the site, determined the presence of several organic compounds above NYSDEC groundwater standards, including chlorobenzene, ethylbenzene, total xylenes and 1,2,4 trichlorobenzene. Detection of inorganic elements above groundwater standards included arsenic, iron, barium, lead, and manganese.

Three well nests (i.e. wells in the overburden and bedrock formations) were installed north of the canal. Analyses of samples from the bedrock wells did not detect any organic compounds above the groundwater standards, except for 4 methylphenol (18 ug/l in RI-2TR and RI-3TR). Also, delta BHC and Endosulfan I were detected in wells RI-1TR and RI-3TR at concentrations less than 1 ug/l (part per billion). Concentrations of most inorganic compounds from these wells were consistent with background levels; however, the levels of aluminum, barium and iron did appear to be elevated above expected background levels.

Analysis of overburden wells at these nests found no contaminants above background levels north of the canal. The canal acts as a barrier to overburden groundwater migration from this site. In addition, samples obtained from domestic wells north and east of the canal did not detect any compounds above NYSDOH Drinking Water Standards. Based on these results migration of compounds from the site beyond the canal, through the bedrock formation, has not occurred.

Surface Water: Two surface water samples were taken in the canal, when it the water level was lowered, near the eastern and western ends of the site. Concentrations of inorganic compounds, including aluminum, iron, and lead exceeded NYSDEC Surface Water Quality Standards for Class C waters. Tetrachloroethylene was detected in each sample at a concentration slightly above the water quality standard.

Sediment: Sediment samples were taken from four locations at the site: three from a ditch between the site and the canal and one from a pond adjacent to the northeast corner of the site. The samples from the ditch are in an area where leachate seeps are found and that could have affected the sediments. Volatile organic compounds (such as benzene, ethylbenzene, total xylenes and acetone) were found at low levels in these sediments. Semi-volatile compounds (such as butylbenzylphthalate, heptachlor epoxide and di-nbutylphthalate) were detected at higher concentrations in these samples.

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Concentrations of inorganic elements did not exceed those found in typical non-contaminated soils. Results from the pond sediment sample contained acetone (13 ppb), methylene chloride (6 ppb), and di-n-butylphthalate (4,400 ppb). Concentrations of inorganic elements did not exceed those found in typical non-contaminated soils.

Leachate: Leachate was seeping from the landfill and was observed on numerous occasions seeping from the north side of the site. Trace concentrations of organic compounds, including 1,4-dichlorobenzene and 2,4-dimethylphenol, were detected in leachate samples taken. Several inorganic elements, including aluminum, iron, lead, cobalt, and zinc, were also detected in the samples. Leachate staining (i.e., an orange color in the sediments) has been observed on the bottom of the Erie Barge Canal when it is drained. Samples taken by the NYSDEC in April 1993 from stained areas on the canal bottom found elevated levels of aluminum (up to 10,000 parts per million (ppm), iron (up to 40,600 ppm), lead (up to 111 ppm), and zinc (up to 415 ppm). These results are indicative of leachate migration towards the canal when it is drained.

Post-Remediation: The landfill has been properly capped and potential exposures to waste have been eliminated. The cap also minimizes the infiltration of surface (rain) water into the waste mass. Operation and maintenance activities at the McKenna Landfill Site were initiated in March 2002, and continue through the present. Operation and maintenance activities have included, or presently include, leachate removal and disposal (suspended in June 2013 as DEC determined this was not necessary), periodic site inspections, leachate sampling, groundwater, and surface water sampling, mowing and cap repairs, maintenance of site access roads, and report preparation. Groundwater sampling is continuing and confirms that some contaminants in excess of Part 703 standards still remain, however monitoring on the north side of the canal reveals no contamination migration.

Site Health Assessment

People are not expected to come into direct contact with site-related contaminants because the landfill is fenced, capped, and pavement covers much of the adjacent area. People may come into direct contact with contaminants if they dig below the surface. People are not drinking contaminated groundwater associated with the site because sampling has demonstrated that private wells have not been affected.

Owners

Current Owner(s)

Joan Klafehn

Estate of Alan J. McKenna

3856 Lake Road

Brockport NY 14420

Disposal Owner(s)

ALLEN MCKENNA

15155 EAST AVE.

ALBION NY 14411

Operators

Current Operator(s)

ALLEN MCKENNA

15155 EAST AVE.

ALBION NY 14411

bec: w/Enc.

K. Anders, NYSDOH

M. Cruden, Director, Remedial Bureau E

L. Braci, Regional Attorney, Region 8

S. Sheeley, Regional Permit Administrator, Region 8

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B. Anderson, Site Control Section

NEW YORK
state department of
HEALTH

Nirav R. Shah, M.D., M.P.H.
Commissioner

Sue Kelly
Executive Deputy Commissioner

December 19, 2013

Mr. Michael Cruden
Division of Environmental Remediation
NYS Dept. of Environmental Conservation
625 Broadway
Albany, NY 12233

Re: **Site Reclassification (2 to 4)**
McKenna Landfill
Site #837003
Albion (T), Orleans County

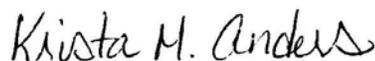
Dear Mr. Cruden:

Per your request, we have reviewed the New York State Department of Environmental Conservation's (NYSDEC's) proposal to reclassify the referenced site from Class 2 to Class 4 on the NYSDEC's Registry of Inactive Hazardous Waste Disposal Sites. Specifically, we have reviewed the proposal to determine whether this reclassification is protective of public health. I understand that remedial actions have been completed at the site and there is residual contamination remaining in soil and groundwater. I also understand that the site is subject to an Environmental Notice that minimizes human exposures to this residual contamination by implementing the following measures.

- Soil: A cap has been constructed in accordance with 6 NYCRR Part 360 requirements for landfill closure. Access to the site is restricted.
- Groundwater: Groundwater use at the site, without the necessary water quality treatment, is restricted.
- Soil Vapor: Operation, maintenance, and monitoring activities include a requirement to notify the NYSDEC in the event that a change of use is planned.

Based on the available information, I concur with the reclassification of the site to Class 4 (requires continued site management). If you have any questions, please call me or Mr. Justin Deming at (518) 402-7860.

Sincerely,



Krista M. Anders, Director
Bureau of Environmental Exposure Investigation

ec: A. Salame-Alfie, Ph.D.
J. Deming / e-File
R. Van Houten – NYSDOH WRO
D. Whitcroft – OCHD
M. Ryan / K. Lewandowski / S. Edwards / W. Welling – NYSDEC Central Office
B. Putzig – NYSDEC Region 8
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