

**New York State Department of  
Environmental Conservation**

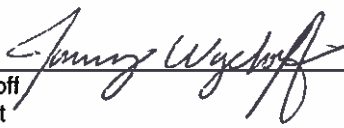
**Site Number 7-54-012**

**Tioga Casting Site Quarterly  
Report**

Fourth Quarter 2011

April 2012

  
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Principal Geologist / Associate Vice President

  
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Staff Geologist

**Tioga Castings Site Quarterly  
Report**

**Fourth Quarter 2011**

Site Number 7-54-012

Prepared for:  
New York State Department of  
Environmental Conservation

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Our Ref.:  
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Date:  
April 2012

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## **1. Introduction**

The New York State Department of Environmental Conservation (NYSDEC) has issued a Work Assignment (# D004443-8) to Malcolm Pirnie, Inc. (Malcolm Pirnie), for Operation, Maintenance, and Monitoring at the Tioga Castings Site (NYSDEC site number 7-54-012) in New York State. Malcolm Pirnie has prepared this Quarterly Report in accordance with the NYSDEC-approved Site Management Plan (SMP) to summarize fourth quarter 2011 operation and maintenance (O&M) activities.

## **2. Site Description**

The Tioga Castings site is located on Foundry Street, Owego, Broome County, New York. The former foundry buildings have been razed, leaving the concrete slabs in-place. A capped, closed landfill is present at the western end of the site. In August 2011, the boundaries of the site (originally encompassing approximately seven acres) were reduced by the NYSDEC to only include the approximately one acre landfill.

### **3. Operation and Maintenance**

Operation and Maintenance (O&M) activities were performed on December 21, 2011 in accordance with the NYSDEC-approved SMP. A Post Closure O&M Checklist (Appendix A) was used to document the current status of the landfill, including security and landfill cap maintenance. Site photographs taken during the landfill inspection are provided in Appendix B. The next O&M event is scheduled to be performed during the second quarter 2012.

#### **3.1 Landfill Security**

The landfill perimeter fence, entry gate, and locks were inspected for proper operation and signs of deterioration. As indicated in the O&M Checklist, no problems were observed with the integrity of these components. In addition, the Foundry Street entry gate warning sign was in place and in acceptable condition.

#### **3.2 Landfill Cap Maintenance**

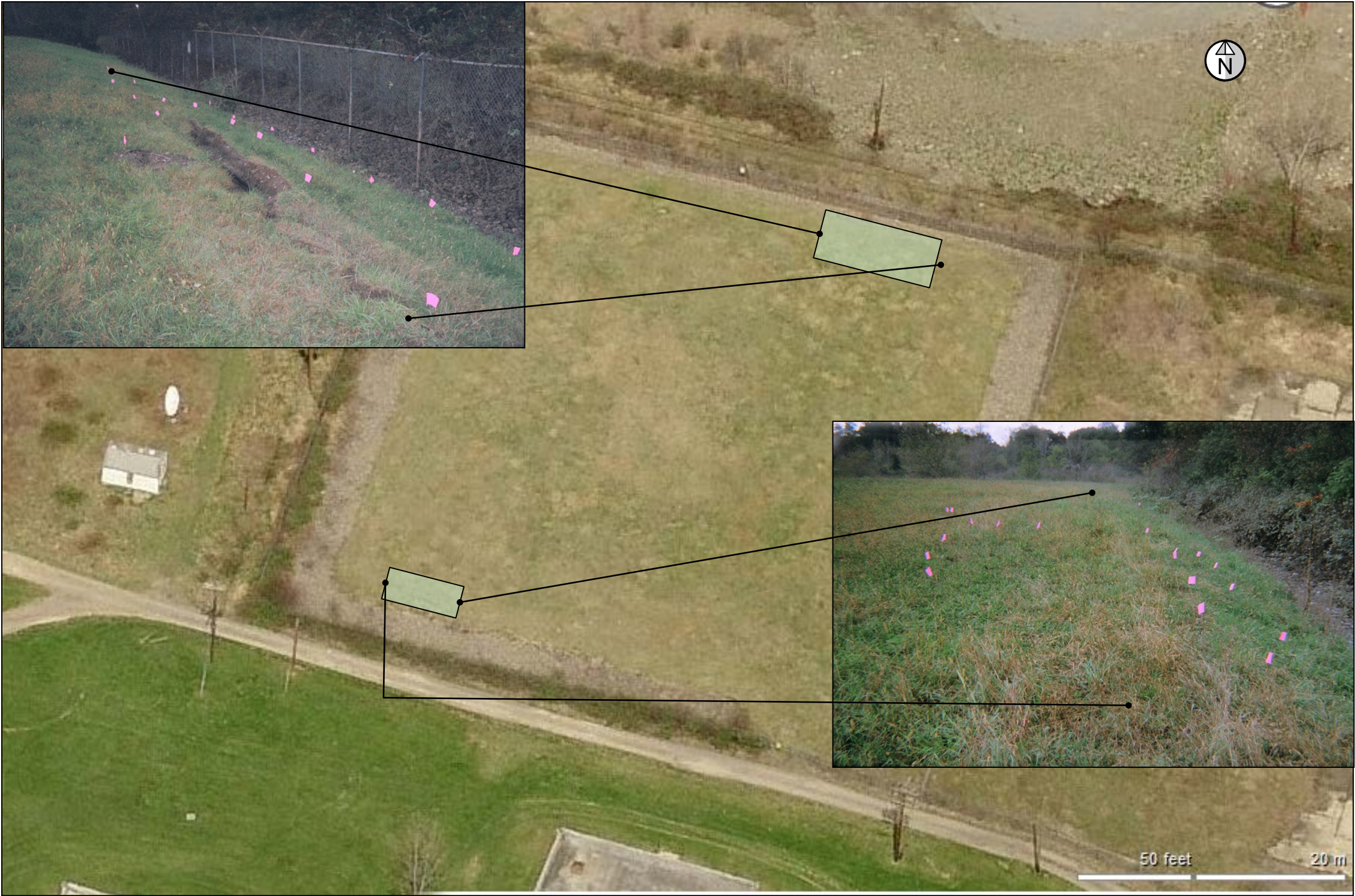
A visual inspection of the landfill cap was performed to assess the landfill for burrowing rodents, erosion, woody vegetation, and settlement. As shown in the O&M Checklist (Appendix A), evidence of burrowing rodents is present on the slope of the landfill cap and brush is present in the drainage ditches.

The landfill cap sustained flood damage in September 2011 caused by Tropical Storm Lee. As shown in Figure 1, the north and south sides of the landfill contained evidence of soil failure and minor slumping on the banks (indicated by pink pin-flags). The soil failure on the north side occurred over an approximately 50-foot area in the northwest corner of the landfill. Figure 1 shows that the sub-grade geo-textile was exposed over an approximately 10-foot linear area perpendicular to the slope of the landfill. The soil failure along the south bank consisted of visible cracking and minor bulging over an approximately 30-foot area in the southeast corner of the landfill. The NYSDEC was notified of the damage following a post-storm inspection on September 29, 2011. An opinion of probable costs for the repairs was provided to the NYSDEC on October 5, 2011. The repairs are scheduled to be completed during the first quarter 2012.

#### **4. Recommendations**


Brush and woody vegetation should be removed from the landfill cap and drainage ditches to reduce the potential for their root systems to compromise the integrity of the landfill cap.





**Figure 1**  
**Landfill Repair Areas**

Tioga Castings Site  
Owego, New York  
NYSDEC Site Number 7-54-012

0  50 ft  
Approximate

Source: BING Maps / Microsoft, 2011.



## **Appendix A**

Post-Closure Operation and  
Maintenance Checklist

# TIOGA CASTINGS SITE LANDFILL

## Post-Closure Operation and Maintenance Checklist

Inspected by: Jeremy Wyckoff

Date: 12/21/2011 Time: 10:00

Weather Conditions: Rain, ~40° F

### LANDFILL COVER SYSTEM

Erosion	<u>      </u>	YES	<u>  X  </u>	NO
Holes or Cracks in Cover	<u>  X  </u>	YES	<u>      </u>	NO
Cap Settlement	<u>      </u>	YES	<u>  X  </u>	NO
Ponded Water or Wet Areas	<u>      </u>	YES	<u>  X  </u>	NO
Burrowing Rodents	<u>  X  </u>	YES	<u>      </u>	NO
Sparse Vegetation/Bare Soil	<u>      </u>	YES	<u>  X  </u>	NO
Brush or Other Woody Vegetation,	<u>      </u>	YES	<u>  X  </u>	NO
Excessive Weeds in Grass	<u>      </u>	YES	<u>  X  </u>	NO
Grass Mowed	<u>  X  </u>	YES	<u>      </u>	NO

### DRAINAGE DITCHES

Erosion	<u>      </u>	YES	<u>  X  </u>	NO
Obstructions	<u>      </u>	YES	<u>  X  </u>	NO
Sediment Accumulation	<u>      </u>	YES	<u>  X  </u>	NO
Evidence of Surcharging	<u>      </u>	YES	<u>  X  </u>	NO
Presence of Brush	<u>  X  </u>	YES	<u>      </u>	NO

Comments: Landfill cap damage documented following Hurricane Lee. Information provided

to NYSDEC. Photos taken.

Continued

**FENCING**

Warning Signs	<u>  X  </u>	OK	<u>      </u>	OTHER
Gates and Locks	<u>  X  </u>	OK	<u>      </u>	OTHER
Posts	<u>  X  </u>	OK	<u>      </u>	OTHER
Top Tension Wire	<u>  X  </u>	OK	<u>      </u>	OTHER
Barbed Wire	<u>  X  </u>	OK	<u>      </u>	OTHER

Comments: \_\_\_\_\_  
\_\_\_\_\_

**MONITORING WELLS**

Capped and Locked	<u>  X  </u>	YES	<u>      </u>	NO
Casing Damage	<u>      </u>	YES	<u>  X  </u>	NO

Comments: \_\_\_\_\_  
\_\_\_\_\_

INSPECTOR'S SIGNATURE



DATE 12/21/2011

## **Appendix B**

Site Photographs



**Photograph 1:**  
**Damage to cap along north end of landfill, facing west.**



**Photograph 2:**  
**Soil failure along south end of landfill, facing west.**





**Photograph 3:**  
**East side of landfill, facing south.**



**Photograph 4:**  
**Landfill cap, facing southwest.**





**Photograph 5:**  
**West side of landfill, facing south.**



**Photograph 6:**  
**Landfill cap, facing northwest.**