



**Countywide Recycling & Disposal Facility**

**Remediation Unit**

**Monthly Progress Report  
Of  
Operations, Monitoring & Maintenance Activities**

**APRIL 2010**

*Prepared By:*

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Remediation Unit

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## **Introduction**

This document provides a monthly report of monitoring and other activities conducted in April 2010. These activities are required by the Operations, Monitoring, and Maintenance (OM&M) Plan, developed for the facility and adopted by the Ohio Environmental Protection Agency (OEPA) on September 30, 2009. The primary objectives of the monitoring portion of this plan are as follows:

1. Monitor status/progression of the reaction.
2. Monitor characteristics of leachate and gas.
3. Track settlement and slope movement/stability of waste mass and perimeter berms.
4. Monitor exposure conditions for engineered components.
5. Determine when conditions are suitable for composite capping.
6. Assess conditions requiring notification, repair, further evaluation or corrective action.
7. Provide a summary of monitoring and data collection, relevant activities conducted since the prior report, trigger events, and conditions which may require additional non-routine activities or investigation.

It should be noted that the OM&M Plan requires inspections, routine maintenance, etc., which are activities that are not presented in this submission. These activities are documented as required, and records are retained in the OM&M Managers office.

### **1. Monthly Summary Narrative**

During the month of April, all daily, weekly, and monthly tasks were completed, as well as many of the quarterly inspections. The quarterly aerial infrared scan was completed in April. The remainder of quarterly data collection will occur during the month of May.

In order to mitigate the effects of diffusion of odors through the temporary cap in certain areas, a survey was conducted of abandoned pipes on the 88 acres. These pipes include abandoned horizontals, finger drains, recirculation lines, abandoned header access points, and other parts of the system which had been abandoned above grade in the past. As part of the survey, gas quality and pressure were checked at select points to evaluate the effectiveness of extraction at these points. At a number of these locations, gas quality and pressure warranted connection of these points to the active gas system. These connections were made, resulting in additional gas extraction and a reduction of diffusion in these areas.

As had been discussed in prior reports and Team Countywide Meetings, historical vertical survey data for Pin IP-F1 showed consistent triggers for vertical change (as compared to initial survey/baseline elevation) since January 2010. In January 2010, there was an elevation increase, believed to be a result of frost heave. The elevation of this pin has been fairly consistent since that date, ignoring variances likely due to equipment error. The original survey elevation was 1141.06 surveyed on October 6th 2009. From January 13th thru April 13th the average elevation has been 1141.15. On May 10, 2010, Republic received approval from the OEPA to reestablish the baseline at IP-F1 as 1141.15 to eliminate this pin as a continuous false vertical trigger. Republic has applied this new baseline elevation to the April 2010 data presented in this report to eliminate false triggers.

## **2. New Construction**

No new construction is currently planned. Republic has postponed redrilling of six vertical gas extraction wells on the 88-acres. The wells are not immediate compliance, gas control, or odor concerns, and Republic prefers to avoid this type of intrusive work during nice weather if at all possible to limit the impact to the community. These activities have been rescheduled for late fall-winter 2010. Republic may also complete repairs to an underperforming section of the south toe drain during this time.

## **3. Major Non-Routine Maintenance, Repairs or Events**

Routine maintenance and repairs of the temporary cap, leachate, and gas systems were completed during the month of April. No major non-routine maintenance or repairs were necessary.

Based upon gas quality data collected at Recovery Well RW-1, Republic believes that the well casing at this vertical collector has failed. This collector is no longer a viable landfill gas collector, but is rather an active odor source. Republic intends to abandon this collector in May. Given the active gas collection at the deep trench and in vertical wells in the area, installation of a replacement collector will not be necessary. Details of the abandonment will be presented in the OM&M monthly report.

## **4. New Trigger Events**

Areas of 2% or greater annualized settlement are depicted on the monthly settlement survey map. Per the OM&M Plan, an exceedance of this settlement rate should only be considered a trigger if it occurs in a location where it had not been exceeded in the previous event. The majority, if not all, of the areas exceeding the settlement rate in April have exceeded the trigger in prior months. Areas along the toe of the waste mass have consistently shown false triggers due to the accuracy limits of the survey equipment and thickness of waste mass. Pin and plate monitoring along the toe of slope and near the waste limits supports that there is limited settlement in these areas.

Several localized areas of settlement were observed just north of the former solidification area and former haul road and to the west of the primary settlement front. Generally, one or two survey points resulted in exceedances of the trigger in each of these areas, and a review of the data indicates that the March settlement is within a few hundredths of that observed in April.

The settlement data was evaluated and is within the ranges and trends observed in prior months. There does not appear to be any anomalies or significant excursions outside the trends within the settlement data set. The data does not suggest that the settlement observed should cause concern from a slope stability or engineering control integrity standpoint.

The April 2010 data reflects a greater than 25% increase of carbon monoxide (CO) levels at header sampling branch designated as HBS01 between the March and April sampling events. However, overall, the total system CO in April decreased 13% from that measured in March. This data is presented below:

ID	January (ppm)	Jan Total	February (ppm)	Feb Total	March (ppm)	Mar Total	April (ppm)	End Result Mar to Apr
HBN01	583.8	1070.8	811.1	1251.4	851.1	1095.2	778.8	-8%
HBN02	487		440.3		244.1		120.4	-51%
HBS01	150.4	744.8	225.3	674	270.1	836.1	347.5	29%
HBS02	594.4		448.7		566		429.5	-24%

In accordance with Volume 1, Appendix F of the OM&M Plan, wellhead temperatures were reviewed to evaluate a potential SSO event. No significant temperature increase or gas quality change indicative of an SSO event was observed. Therefore, per the plan, the evaluation has been satisfied, and no additional investigation is necessary. As has been discussed, day to day changes in vacuum distribution and adjustments in the wellfield can affect gas quality and flow at individual header branches. A comparison of total CO level measured in the system is the best indicator of production versus collection.

#### 5. Investigation Results from Previous Trigger Events

It was agreed upon between Republic and the Agencies that the values resulting in triggers during the March 2010 monitoring period were consistent with ranges and trends previously reflected, and represent no significant anomalies when compared to prior ongoing trends. As such, the analysis of these triggers did not prompt any additional measures beyond the requirements of the OM&M Plan and ongoing activities.

#### 6. Trend Graphs and Drawings

The graphs, tables, and figures are included in the attachments to this report. Due to the vast number of these and the detail that they provide, a full written summary is not provided in this document. The data will be discussed in depth at the Team Countywide Meeting.

#### 7. Review of Potential Need to Extend Temporary FML Cap

Currently, the Remediation Unit consists of approximately 18 acres which do not have a temporary cap. Volume 1, Section 7.1 of the OM&M Plan details conditions which would initiate an assessment which could require installation of temporary cap in this area. Such conditions include;

- Uncontrollable odor or fugitive emissions,
- Unusual settlement (Incremental settlement greater than 2% per year),
- Atypical or uncontrollable leachate outbreaks,
- Methane/carbon dioxide ratio less than 1.0,
- Maximum wellhead temperatures greater than 150°F,

- Maximum carbon monoxide greater than 100 ppmv.

At this time, the conditions observed in this area supplemented by the data collected during monitoring and inspections do not indicate the need for expansion of the temporary cap.

#### **8. Petitions to Perform Work**

The monitoring and inspections conducted during the operating period do not indicate the need for additional work which would require approval. As such, there are no petitions to perform such work at this time.

#### **9. Proposed OM&M Plan Revisions**

Revisions to the OM&M Plan were completed in February and distributed. There are no other proposed revisions at this time. However, Republic is in constant review of the OM&M Plan, and will be conducting and annual review for possible revisions/inclusions/exclusions as required by the OM&M Plan. This review is expected to be submitted in September 2010 per the OM&M Plan requirements.

#### **10. Odor Summary/Complaints**

During the month of April, there were 15 odor complaints logged by Stark County Health Department and Republic Services. The following is an accounting of these complaints:

- Eight odor complaints received and investigated by Countywide, confirmed as garbage odor
- Four odor complaints not received real-time by Countywide, but based upon time and location of complaint, correlated with complaints of garbage odor that were investigated and confirmed.
- Two odor complains not received real-time by Countywide. Could not be confirmed or correlated by any other odor complaints, odor causing remediation work or events, or by scheduled odor rounds.
- One odor complaint received and investigated real-time in which odor was not detected



5/18/09

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Date

# Attachment 1

## Graphs

## **Attachment 2**

### **Tables**

## **Attachment 3**

### **Figures**

## **Attachment 4**

### **Pin and Plate Evaluation**