



November 5, 2015

Mr. Arturo Burgos
Mr. Tom Ryan
City of Tucson, Environmental Services
4004 South Park Ave.
Building 1
Tucson, Arizona 85726

Re: Annual Closed Landfill Inspection – Rio Nuevo North Landfill

INTRODUCTION

On October 1, 2015, Engineering and Environmental Consultants, Inc. (EEC) performed the annual field inspection at the closed Rio Nuevo North Landfill. Rio Nuevo North Landfill was operated by the City of Tucson as a Municipal Solid Waste facility from 1960 through 1971. The property has been developed as a City owned Community Resource Center (south portion of the property) and a branch campus of Pima Community College (north portion of the property).

Annual inspections are required at City of Tucson owned non-regulated closed landfills in accordance with the guidance document entitled "COT Closed Landfills Inspection and Maintenance Reporting and Procedures, March 2011". This guidance document was internally prepared by the City of Tucson Environmental Services Department (COT-ES).

Key elements of this inspection report are:

- A narrative summary of facility conditions including recommended corrective action(s) to be undertaken prior to the next scheduled inspection
- The Landfill Inspection Table used to document observed conditions (Attachment 1)
- An inspection photo log (Attachment 2)

INSPECTION SUMMARY

The annual field inspection of Rio Nuevo North Landfill is organized and conducted using the inspection report table included in the COT-ES inspection guidance document. A copy of the table filled out during this inspection is included with this report (Attachment 1). The table lists specific landfill items that must be inspected and provides space to comment on the conditions encountered during the inspection. The items inspected and the current conditions of these features at Rio Nuevo North Landfill are summarized as follows:

Perimeter Security Fence and Gates

The property has been developed as a public facility. No full perimeter fencing.

Inspection Roads

Both the north and south segments of the landfill are completed as vehicle parking lots. The parking lots are in generally poor condition due to settlement, cracking of the asphalt, and development of small sinkholes (Photos 1, 2, 3, 4, 5).

Stormwater Controls

The stormwater channel that bisects the property is worn and displays some settling but remains functional.

Stormwater Retention Basins

No stormwater retention basins are located on the landfill.

Landfill Earthen Cap

Settlement and cracking of the asphalt was observed in several locations in the parking lots. In addition, two small sinkholes were observed. These sinkholes are patched with fill material (cold patch asphalt and soil) (Photos 4, 5).

In addition, an overhead parking canopy support post has settled and is leaning slightly resulting in damage to the canopy (Photos 6, 7, 8, 9).

Landfill Gas Extraction System Wellfield

With the exception of settling at some well locations, the landfill gas extraction wells appear to be in good condition (Photo 10).

Gas Extraction System Compound

The gas extraction system compound was recently re-roofed and is in good condition.

Landfill Gas Monitoring Wells

The landfill gas monitoring probe wells appear to be in good condition.

Groundwater Monitoring Wells

No problems were observed with groundwater monitoring wells.

Remediation Equipment

The remediation system equipment appears to be in good condition.

Illegal Dumping

No illegal dumping was observed on the landfill.

Neighboring Land Uses

There have been no changes in land use of neighboring properties since the last inspection.

CORRECTIVE ACTIONS COMPLETED SINCE LAST ANNUAL INSPECTION

The following recommendations from the last annual inspection have been completed:

- The roof of the landfill gas extraction system compound has been repaired
- The interior ceiling drywall in the landfill gas extraction system building has been replaced.

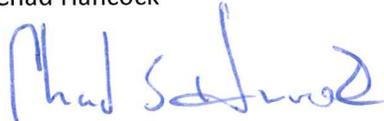
RECOMMENDED CORRECTIVE ACTIONS

- Crack and surface sealing of the asphalt parking lots was proposed in the last annual inspection. This work has not been completed. In addition, numerous areas on the parking lots have settled and small sinkholes have developed in at least two locations. The sinkholes have been crudely mitigated with asphalt patch or soil fill. Costs estimates should be obtained from licensed paving contractors to properly repair the parking lots.
- The support post for the overhead parking canopy at parking space #43 on the south portion of the property has settled and is noticeably leaning. This has resulted in bending and drooping of the overhead canopy. Estimates to straighten, stabilize, and repair the canopy at this location should be obtained.

No other corrective actions are recommended at this time.

Should you have any questions or require additional information, please contact me at 520-321-4625 (office) or 520-488-9205 (cell).

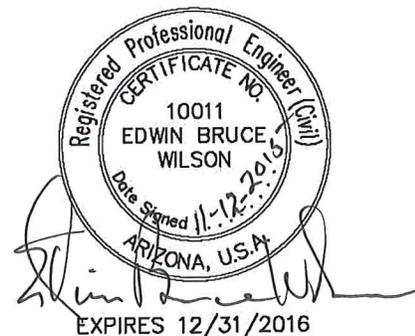
Sincerely,
Chad Hancock



Field Services Manager, Environmental Services

Attachments:

- 1: Landfill Inspection Table
- 2: Site Photographs



ATTACHMENT 1

LANDFILL INSPECTION TABLE

**CITY OF TUCSON ENVIRONMENTAL SERVICES
ANNUAL CLOSED LANDFILL INSPECTION REPORT
RIO NUEVO NORTH LANDFILL**

INSPECTION ITEM	DISCREPANCY	CORRECTIVE ACTION
Perimeter Security Fence and Gate (holes, structure issues)	None	
Inspection Roads (washouts, obstructions, potholes)	Settlement and small sinkholes observed in parking lots	Repair
Storm Water Controls (berms, let downs, spillways)	None	
Storm Water Retention Basins (washouts, excessive silt in, holding water)	N/A	
Landfill Earthen Cap (washouts, trash showing, debris and trash)	Settlement and small sinkholes observed in parking lots. Overhead parking canopy support post settling/leaning at parking space #43	Repair
Landfill Gas Extraction System Wellfield (piping, wells, vaults, washouts)	Settlement at some extraction well locations	Repair with other parking lot repairs
Landfill Gas Extraction System Compound (fencing, blower equipment, flare, carbon canisters)	None	
Landfill Gas Monitoring Wells (including bollards, vaults, locks)	None	
Groundwater Monitoring Wells (including bollards, vaults, locks)	None	
Remediation Equipment (compound fence, erosions, leaks)	None	
Illegal Dumping (including overgrown vegetation, homeless camps, vectors)	None	
Neighboring Land Uses (changing adjacent land uses that will or currently are impacting the landfill site)	None	
INSPECTOR SIGNATURE 	DATE 10/1/15	

ATTACHMENT 2

SITE PHOTOGRAPHS



Photo 1: Widespread cracking of parking lots, some previously repaired (north lot shown)



Photo 2: Cracking/settling of parking lot, south parking lot



Photo 3: Cracking settling of parking lot, north lot

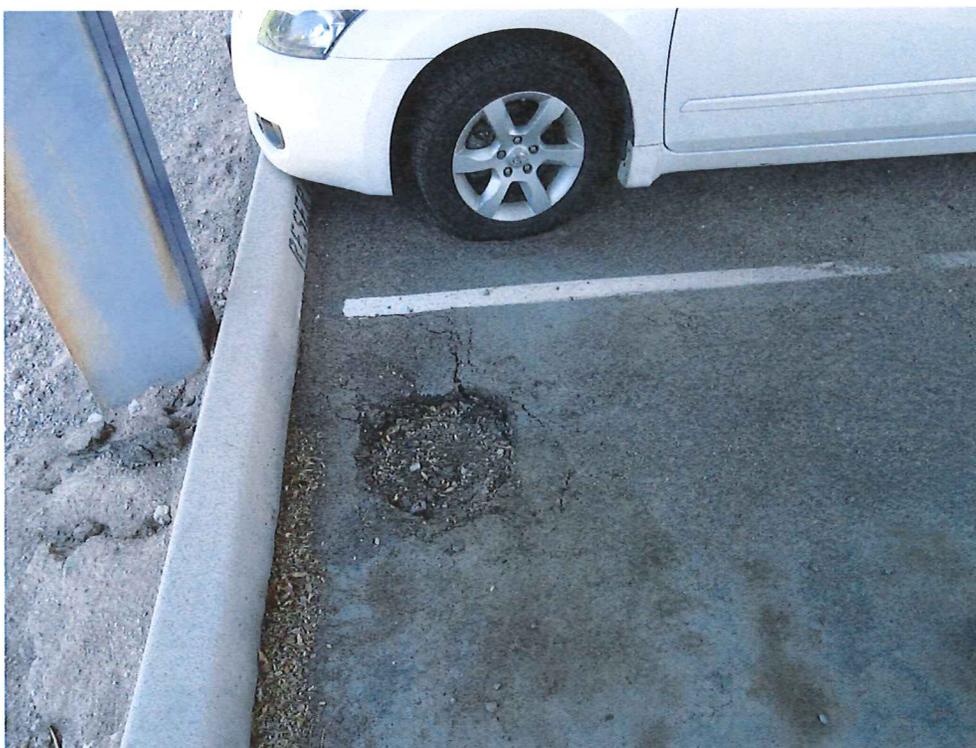


Photo 4: Sinkhole, patched with asphalt, south parking lot



Photo 5: Sinkhole, covered with soil, north parking lot



Photo 6: Drooping canopy at parking space #43 (south parking lot)



Photo 7: Support post leaning at parking space #43



Photo 8: Damaged/bent overhead canopy at parking place #43



Photo 9: Damaged/bent overhead canopy at parking place #43



Photo 10: Settling at landfill gas extraction wellhead