

ENVIRONMENTAL SAMPLING CORPORATION

Dedicated to Environmental Monitoring, Science & Technology

May 12, 2020

Mr. George Volpentesta
Wisconsin Department of Natural Resources
141 NW Barstow Street, Room 180
Waukesha, WI 53188

**RE: Advanced Disposal Services Emerald Park Landfill
Air Pollution Control Operation Permit No: 268244130-P20
FID No. 268244130
Surface Emissions Monitoring Exceedance Notification and Proposed Alternative Remedies
First Quarter 2020**

Dear Mr. Volpentesta,

On behalf of ADS Emerald Park Landfill (ADS-EPL), ESC is providing notification of first quarter 2020 surface emissions exceedances at the facility and is requesting Department approval of alternative remedies to correct exceedances with the planned corrective actions presented herein pursuant to air operation permit 268244130-P30 condition Part I.A.1.b.(19)(e)(i).

Part I.A.1.b.(19)(e)(i)

(e) For any location where the monitored methane concentration equals or exceeds 500 parts per million above background three consecutive times, the permittee shall

(i) Except as provided in I.A.1.b.(15), install a new well or other collection device within 120 calendar days after the initial exceedance. An alternative remedy to the exceedance, such as upgrading the blower, header pipes or control device, and a corresponding timeline for installation may be conducted if approved by the Department, in writing.

During the first quarter 2020 surface emissions monitoring conducted on March 24, 2020, ten locations in Phases 3-7 and along the south slope vaults had measured surface emissions that exceeded 500 ppm methane (**Attachment 1**). Initial corrective actions were taken to reduce the surface emissions by improving cover soils and pipe penetration seals in the affected areas and adjusting the applied vacuum at the affected and surrounding gas extraction wells.

Surface emissions in three of the ten areas did not exceed the 500 ppm methane limit during either the 10-day recheck conducted on April 3, 2020 or the second 10-day recheck conducted on April 14, 2020 and did not exceed the 500 ppm limit during the 30-day recheck conducted on April 24, 2020. No additional monitoring was required at these three locations.

Several exceedance areas were located in active construction areas and could not be monitored during one or both of the 10-day and second 10-day rechecks. At the direction of the Department, any locations that could not be re-monitored during one of the rechecks were considered on-going exceedances. Despite the initial corrective actions taken, seven areas (GEW-33R, GEW-63, GEW-78,

GEW-89, Vault 6W, Header pipe downslope from GEW-89, and Valve stems between Vault 6E and Vault 5SW) still had surface emissions that were not corrected by the 10-day and second 10-day rechecks. Locations with on-going exceedances are identified on **Attachment 2**.

In order to reduce surface emissions at these seven areas, ADS-EPL plans to complete the following gas system improvements by July 22, 2020, which is within the 120-day timeline specified in the air permit. These improvements involve alternative remedies which require Department approval.

- Install additional and enhance existing soil cover around penetrations and structures where surface emissions exceedance are identified.
- Install new or additional air, forcemain pipe, and pumps to 33 existing vertical gas wells which will provide these wells with dual extraction capability (liquids and LFG).
 - This work was completed on May 8, 2020.
- Use the dual extraction enhancements (described above) to dewater parts of the wellfield where surface emissions are identified and increase the collection efficiency of the existing vertical gas wells.
- Continue to re-tune the wellfield as existing vertical gas wells are dewatered to ensure well tuning for maximum gas collection efficiencies.
- Install a larger submersible pump in gas condensate sump CS-2 in order to maintain low liquid levels in the 12" Gas Header on West Side of Phase 7 North. Lower liquid levels in this header will increase available vacuum to wells connected to this header which are in the vicinity of several of the SEM Exceedances.
 - This work was completed on May 1, 2020 with notable increases observed in available header vacuum in areas of SEM exceedances.
- Video Inspect and jet clean, if necessary, to ensure proper function of the landfill gas header drip-legs DL-3 and DL-4 on South Side of Landfill. Ensuring fully functional drip-legs here will help increase available vacuum to wells on south side of site in areas identified with SEM Exceedances.
 - The video inspection of DL-3 and DL-4 was completed on April 15, 2020; jetting was not required. Noticeable vacuum increases were observed following the installation of the larger pump at CS-2.
- Request a higher operating value for temperature at LIW03 to allow for increased applied vacuum to this well to reduce the methane. Currently the applied vacuum at LIW03 is limited to allow the well to operate below the NSPS temperature limit of 131 degrees F.
- Evaluate gas extraction well GEW-33R with a camera to determine if blockage can be cleared or if the well will need to be replaced.

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Please contact Randy Frank, Regional Landfill Gas Manager at 414- 422-9075 ext. 102 or Mike Hackney, General Manager at 414-529-1360 with any questions.

Sincerely,
Environmental Sampling Corporation



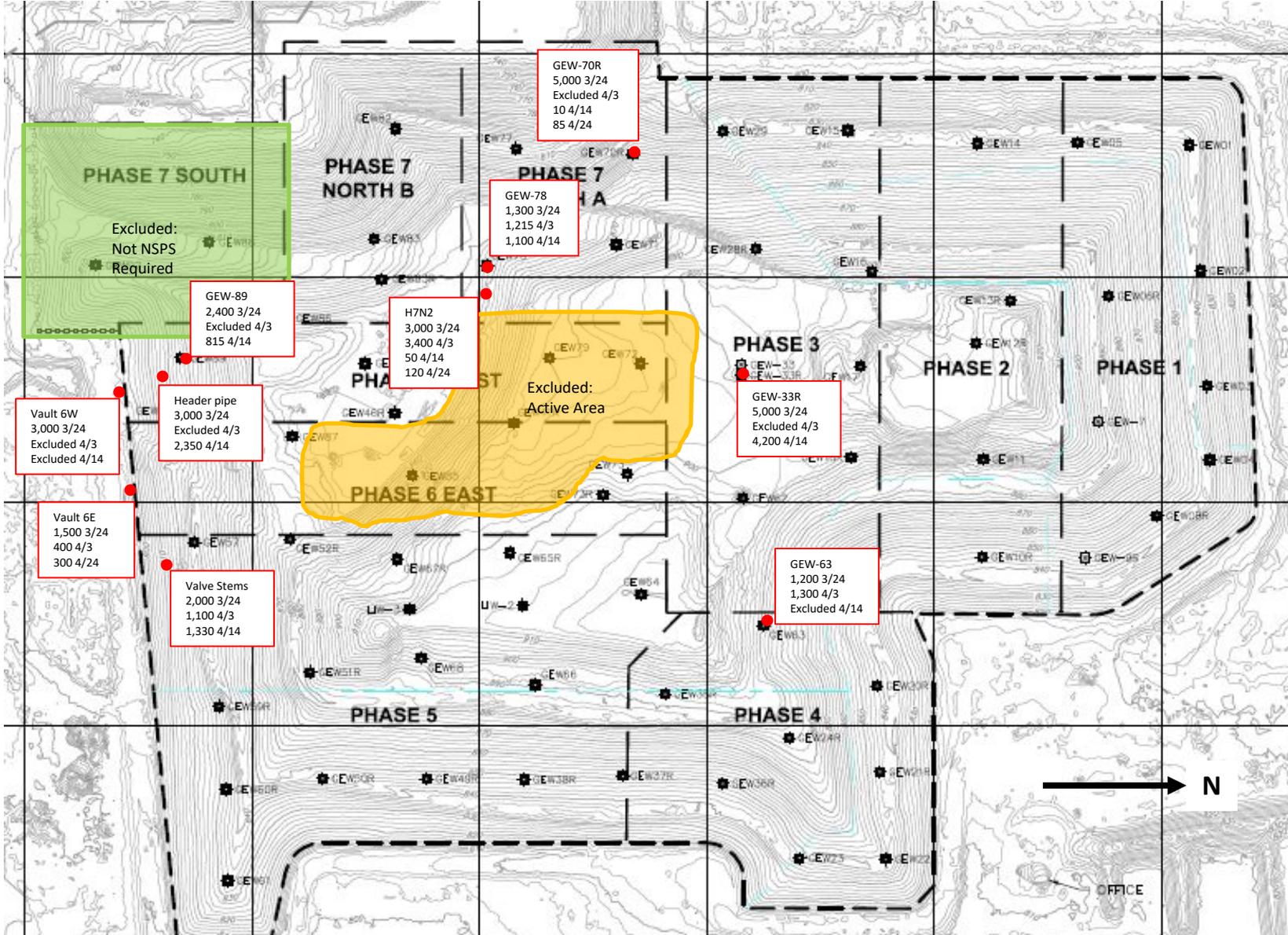
Tracy Ipavec
Sr. Environmental Specialist

Attachments

cc: Randy Frank: ADS-Midwest (electronic copy)
Dan DeWaard: ADS-Midwest (electronic copy)
Tim Curry: ADS-Midwest (electronic copy)
Kari Rabideau: ADS-Midwest (electronic copy)
Anthony Militello: ADS-Midwest (electronic copy)
Michael Hackney: ADS-EPL (electronic copy)
Scott Croft: ADS-EPL (electronic copy)
ADS-EPL File Copy
Tyler Field: Cornerstone Environmental Group (electronic copy)
Jo Spear: JSA Civil Environmental Engineers (electronic copy)
City of Muskego, EPL Standing Committee (electronic copy)
Sherren Clark: SCS Engineers (electronic copy)
Frank Perugini: ESC (electronic copy)

Attachment 1

First Quarter 2020
Surface Emissions Monitoring Exceedances



GEW-70R
5,000 3/24
Excluded 4/3
10 4/14
85 4/24

GEW-78
1,300 3/24
1,215 4/3
1,100 4/14

GEW-89
2,400 3/24
Excluded 4/3
815 4/14

H7N2
3,000 3/24
3,400 4/3
50 4/14
120 4/24

GEW-33R
5,000 3/24
Excluded 4/3
4,200 4/14

Vault 6W
3,000 3/24
Excluded 4/3
Excluded 4/14

Header pipe
3,000 3/24
Excluded 4/3
2,350 4/14

Vault 6E
1,500 3/24
400 4/3
300 4/24

Valve Stems
2,000 3/24
1,100 4/3
1,330 4/14

GEW-63
1,200 3/24
1,300 4/3
Excluded 4/14

SURFACE EMISSIONS TESTING AREA

First Quarter 2020 Surface Emission Report
Advanced Disposal Services Emerald Park Landfill
Muskego, Wisconsin

Legend

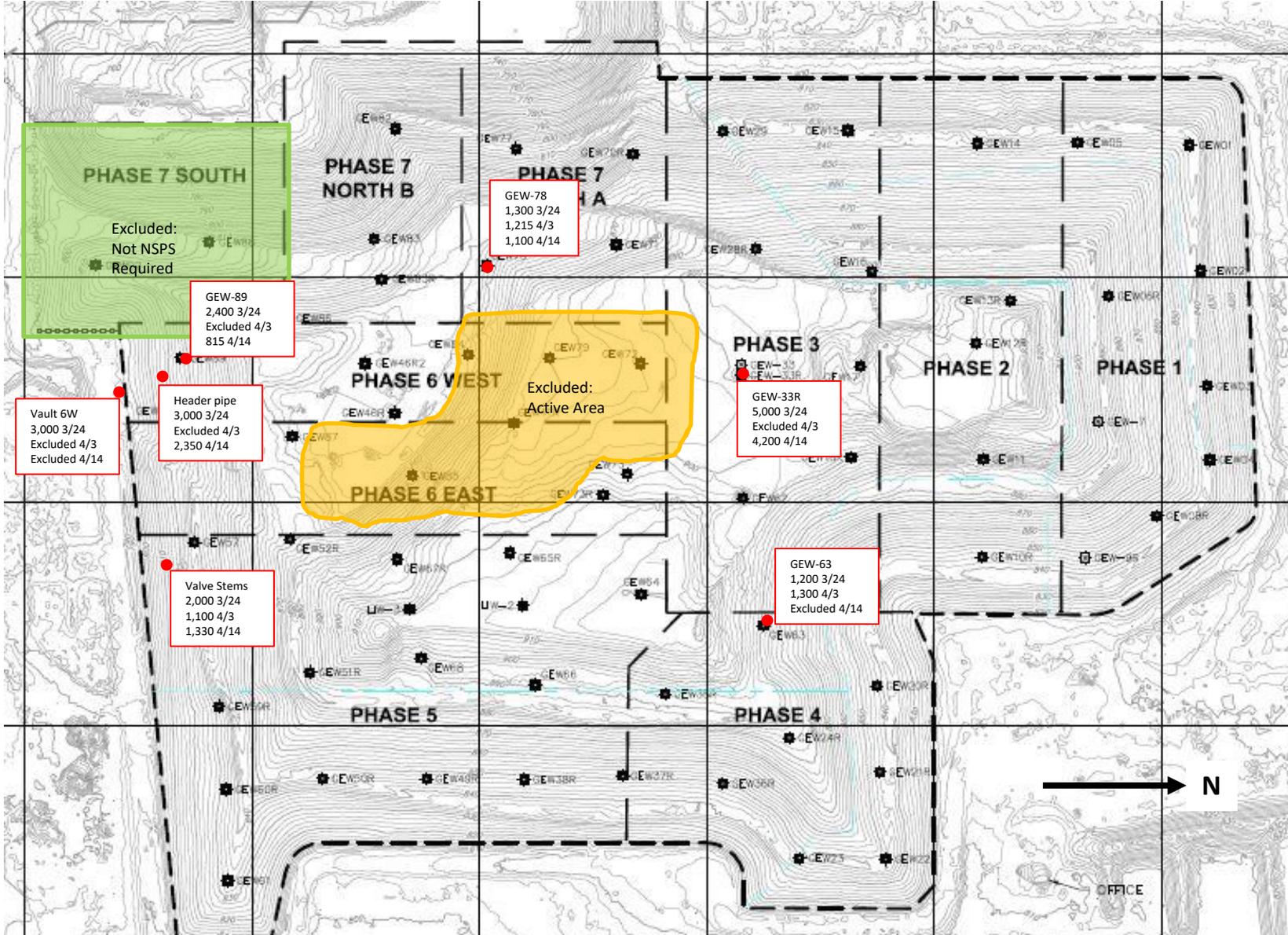


Initial Rds. 03/24/2020
10-Day Re-check 04/03/2020
Second 10-Day Re-check 04/14/2020
One month re-check 04/24/2020



Attachment 2

Surface Emissions Monitoring Locations with On-going Exceedances



SURFACE EMISSIONS TESTING AREA

Areas with On-going Surface Emissions Exceedances

First Quarter 2020 Surface Emission Report
 Advanced Disposal Services Emerald Park Landfill
 Muskego, Wisconsin

Legend



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