Settlement of Final Cap

The prevalent method of determining if a cap had achieved stability in the documents reviewed during the meeting seems to be through settlement analysis using topographic survey. This is one area where I believe a differentiation needs to be made between unlined sites that have been closed for over 10 years and lined sites that will be moving toward an Environmental Covenant (EC) in the future. In accordance with the SDP Permits for existing closed landfills, these facilities have been inspected on a semi-annual basis (at a minimum) since closure. The inspections are to review the “site’s conformance and nonconformance with the permit and the approved plans and specifications”. The Closure Permits generally contain such provisions as:

- “All diversion and drainage systems must be maintained”
- “The vegetative cover shall be reseeded as necessary”
- “The integrity and effectiveness of the final cover must be maintained”

Any deficiencies to the items above could be indications that the landfill cap has not reached a “steady state” regarding settlement and that the cap may not be fully effective in protecting human health and the environment. Visual clues to settlement issues at closed landfills can be documented by such items as surface water ponding, changes in vegetation, or vehicle rutting. Since the inspections are required during the Spring and Fall, it is likely that if cap settlement is severe enough to cause changes in surface water drainage patterns, changes to vegetation, erosion, etc. issues would be noted during one of the semi-annual inspection events.

The SDP Permits for closed landfills require the semi-annual inspection reports to be submitted to IDNR. Cap deficiencies noted and any maintenance to the soil cap needed should be documented in the inspection reports; therefore, there is a readily available historic paper trail available to document cap issues/cap stability. The historical information should be sufficient to document cap stability and would not require physical measurements.

Access Control Requirements in Environmental Covenants

This topic was brought up at the meeting. I have attached a requirement from an EC from 2021 that requires access control to be maintained “in perpetuity”.

NPDES General Permit No. 1

The status of NPDES GP No. 1 after closure was discussed during the meeting. GP No. 1 contains a provision for a “Notice of Discontinuation” (NOD) to be filed once the stormwater discharge is discontinued. The NOD for GP Nos. 1, 2, and 3 is attached. The NOD has a statement (on page 2) defining final stabilization. Based on this definition, a site being considered for the EC should no longer need to be covered by GP No. 1 unless some other activities (such as stockpiling of materials) are allowed on the cap.
d. Construction of residences within the boundaries of the property must be pre-approved by the DNR.

In addition to the general restrictions above, the following specific restrictions are imposed:

a. Restrictions and use limitations and terms due to continued management of landfill gas:

1) There shall be no placement of or construction of enclosed structures on the landfill cap.
2) There shall be no controlled vegetation burns on the property.

b. Restrictions and use limitations and terms due to continued management of leachate:

1) The leachate collection system will continue to be operated and maintained. The leachate from the leachate collection system shall be disposed of at a treatment works with a NPDES Permit.

c. Restrictions and use limitations and terms related to site access:

1) The fencing near the current entrance gate and the gate shall be maintained in perpetuity.

d. Restrictions and use limitations and terms related to land use:

1) The landfill’s cap integrity must be maintained in perpetuity.
2) Biennially, the site shall be inspected by a professional engineer licensed in the State of Iowa, to verify that the property activity and use limitations enumerated in this covenant have been complied with. A report of the inspection shall be sent to the Solid Waste Section of the Agency within 30 days of completion.

8. Notice of Non-Compliance. Any property owner or subsequent transferee of an interest in the property shall notify the DNR as soon as possible of conditions which would constitute a breach of the activity and use limitations in paragraph seven (7) if they have actual knowledge of these conditions or would reasonably be deemed to have knowledge within the normal course of administration of their property interest.

9. Notice to Lessees. Grantor, any holder with a property interest sufficient to grant a lease of the property, and any subsequent transferee shall incorporate the activity and use limitations of this covenant either in full or by reference to this instrument in any lease, license, or other instrument granting a right to possession of the property.
NOTICE OF DISCONTINUATION

OF A STORM WATER DISCHARGE
COVERED UNDER IOWA NPDES GENERAL PERMIT NUMBERS 1, 2, OR 3

Name of the owner or facility to which the storm water discharge general permit coverage was issued.

__________________________________________________________

County: __________________________

List the complete permit authorization number for the discharge. This number is provided on the bottom of the authorization sheet.

IA- _____________-__________

List the date the storm water discharge was discontinued as defined in the applicable general permit or, for construction sites, the date the site reached final stabilization as defined on the back of this form.

__________________________________________________________

The following certification must be signed in accordance with the signatory requirements of the general permit (see back side).

I certify under penalty of law that storm water discharges covered by a storm water general permit at the identified site have ceased. If this is a construction site, I certify that the disturbed soils have been finally stabilized and temporary erosion and sediment control measures have been removed or will be removed at an appropriate time. I understand that by submitting this Notice of Discontinuation, I am no longer authorized to discharge storm water associated with industrial activity or construction activities by Iowa Department of Natural Resources NPDES General Permit No. 1, No. 2 or No. 3 under the authorization indicated above and that discharging pollutants from storm water associated with industrial activity or construction activities to waters of the United States is unlawful under the Clean Water Act where the discharge is not authorized by an NPDES permit.

I further certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for known violations.

__________________________________________________________

Name (print)

__________________________________________________________

Signature

__________________________________________________________

Return to: Storm Water Coordinator
Department of Natural Resources
502 E 9th St
Des Moines IA 50319-0034

__________________________________________________________

Title

__________________________________________________________

Date

01/2022 cmc (over) DNR Form 542-8115
Final Stabilization means that all soil disturbing activities at the site have been completed and that a uniform perennial vegetative cover for the area has been established or equivalent stabilization measures have been employed. All building must be completed before the project is considered finally stabilized.

**SIGNATORY REQUIREMENTS** All Notices of Intent, storm water pollution prevention plans, reports, certifications or information either submitted to the Department or the operator of a large or medium municipal separate storm sewer system, or that this permit requires be maintained by the permittee, shall be signed in accordance with rule 567–64.3(8) of the Iowa Administrative Code as follows:

64.3(8) **Identity of signatories of operation permit applications.** The person who signs the application for an operation permit shall be:

a. *Corporations.* In the case of corporations, a responsible corporate officer including: a president, secretary, treasurer, vice-president in charge of a principal business function, any other person who performs similar policy or decision-making functions or the manager of manufacturing, production or operating facilities if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

b. *Partnerships.* In the case of a partnership, a general partner.

c. *Sole proprietorships.* In the case of a sole proprietorship, the proprietor.

d. *Public facilities.* In the case of a municipal, state, or other public facility, by either the principal executive officer or the ranking elected official.

e. *Storm water discharge associated with construction activity.* In the case of a storm water discharge associated with industrial activity from construction as identified in 40 CFR 122.26(b)(14)(x), either the owner of the site or the general contractor.