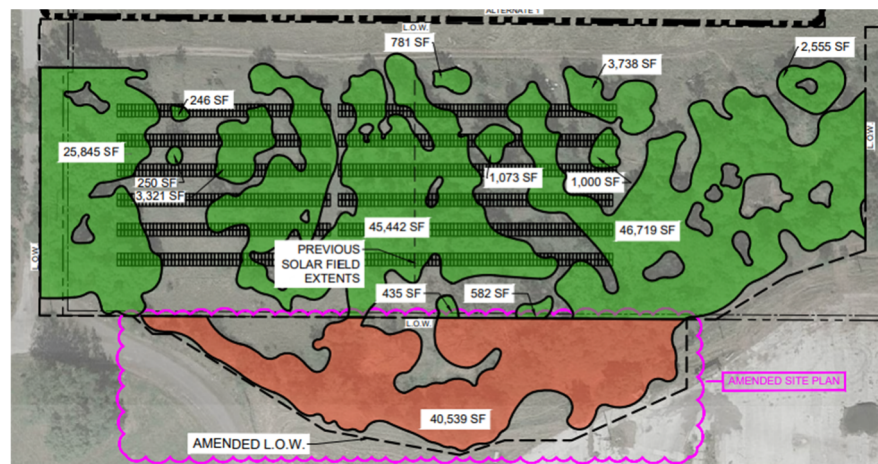


Project: Harriet Street Solar Field  
 Activity ID: 10-2022-019  
 Operation Plan for the Harriet Street Solar Farm – Doc. No. 103882  
 Former Harriet Street Landfill  
 Site 77-UDP-03-14

Per #10 in the Operational Plan for the Harriet Street Solar Field project: “Upon completion of the outlined activities, a report shall be submitted discussing any changes from the original plan, any test results, waste removal, equipment decontamination, etc.”.

This letter is intended to serve as this report, outlining changes from the original plan and instances of waste removal.

- Waste material has been removed from the site per #7 in the operational plan. Waste materials were encountered and properly disposed of by the contractor. During tree removal, grading, and seed prep, waste material was removed from the site.
- A combination of clay fill and topsoil was hauled into the site and spread over both solar field areas. This “cap” varies between 9”-18” and covers an area of approximately 5 acres.
- Additional tree removal occurred to the south of the Animal Control Facility solar array. This array area extended to the east, and the trees became a shading issue. Additional removal shown in the image below in red.



Sincerely,



Jake Knudtson, P.E.  
 Project Engineer



Jolly, Becky &lt;becky.jolly@dnr.iowa.gov&gt;

---

**Fwd: [EXTERNAL]Solar Field Project Status**

1 message

---

**Rath, Brian** <brian.rath@dnr.iowa.gov>  
To: "Knutson, Jake P." <JPKnutson@dmgov.org>  
Cc: Becky Jolly <becky.jolly@dnr.iowa.gov>

Mon, May 20, 2024 at 4:34 PM

Jake - Thanks for the report for the Harriet Street Landfill solar project. I'll review this and schedule a site visit.

**Brian Rath, P.E.**  
**Environmental Engineer Senior**  
Solid Waste and Contaminated Sites Section  
Iowa Department of Natural Resources  
6200 Park Ave, Suite 200  
Des Moines, IA 50321  
515-537-4051  
brian.rath@dnr.iowa.gov  
www.iowadnr.gov



----- Forwarded message -----  
From: **Knutson, Jake P.** <JPKnutson@dmgov.org>  
Date: Mon, May 20, 2024 at 9:20 AM  
Subject: Re: [EXTERNAL]Solar Field Project Status  
To: Rath, Brian <brian.rath@dnr.iowa.gov>

Hi Brian,

Please see attached. Let me know of any questions or additional information needed.

Thanks,

**JAKE KNUDTSON, P.E.** | CITY OF DES MOINES  
Project Engineer | Engineering Department  
(515) 208-4045  
DSM.city | 400 Robert D. Ray Drive | Des Moines, Iowa 50309

---

**From:** Rath, Brian <brian.rath@dnr.iowa.gov>  
**Sent:** Wednesday, May 15, 2024 1:13 PM  
**To:** Knutson, Jake P. <JPKnutson@dmgov.org>  
**Subject:** Re: [EXTERNAL]Solar Field Project Status

**CAUTION:** This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Sounds good. Thanks for the update.

**Brian Rath, P.E.**

**Environmental Engineer Senior**

Solid Waste and Contaminated Sites Section

Iowa Department of Natural Resources

6200 Park Ave, Suite 200

Des Moines, IA 50321

515-537-4051

[brian.rath@dnr.iowa.gov](mailto:brian.rath@dnr.iowa.gov)

[www.iowadnr.gov](http://www.iowadnr.gov)



IOWA DEPARTMENT OF NATURAL RESOURCES

On Wed, May 15, 2024 at 7:47 AM Knudtson, Jake P. <[JPKnudtson@dmgov.org](mailto:JPKnudtson@dmgov.org)> wrote:

Hi Brian,

I'll make sure we have the report submitted per #10. No major changes, outside of hauling in and spreading a cap at the solar array areas and disposing of tires/trash on the surface around the site.

The contractor is working towards getting the solar arrays online, while also removing weeds around the site and prepping to seed the native grass area and the pollinator lawns.

Thanks!

**JAKE KNUDTSON, P.E. | CITY OF DES MOINES**

Project Engineer | Engineering Department

(515) 208-4045

[DSM.city](http://DSM.city) | 400 Robert D. Ray Drive | Des Moines, Iowa 50309

---

**From:** Rath, Brian <[brian.rath@dnr.iowa.gov](mailto:brian.rath@dnr.iowa.gov)>

**Sent:** Tuesday, May 14, 2024 1:45 PM

**To:** Knudtson, Jake P. <[JPKnudtson@dmgov.org](mailto:JPKnudtson@dmgov.org)>

**Subject:** Re: [EXTERNAL]Solar Field Project Status

---

**CAUTION:** This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

---

Jake - Time has flown since our last communication. I still plan on making it out there to look at the finished project. Meanwhile, I do not see in our records that the report was submitted as stated in Item 10 of your approved operations plan (Doc No. [103882](#)). Can you provide an update on when we can expect the report? Thanks.

**Brian Rath, P.E.**

**Environmental Engineer Senior**

Solid Waste and Contaminated Sites Section

Iowa Department of Natural Resources

6200 Park Ave, Suite 200

Des Moines, IA 50321

515-537-4051

[brian.rath@dnr.iowa.gov](mailto:brian.rath@dnr.iowa.gov)

[www.iowadnr.gov](http://www.iowadnr.gov)



On Tue, Aug 22, 2023 at 3:16 PM Rath, Brian <[brian.rath@dnr.iowa.gov](mailto:brian.rath@dnr.iowa.gov)> wrote:

Thank you for contacting us and providing the opportunity to visit the site. I will take you up on your offer. Meanwhile, please continue work on the project as our visit is not a requirement for our process.

**BRIAN L. RATH, P.E.**  
| Environmental Engineer Senior  
P: 515-537-4051

On Tue, Aug 22, 2023 at 12:32 PM Knudtson, Jake P. <[JPKnudtson@dmgov.org](mailto:JPKnudtson@dmgov.org)> wrote:

Hi Brian,

I am reaching out as the approval letter for the operational plan at the solar array project asked for notification when the capping was complete at the solar array locations, to give the opportunity for the Iowa DNR to visit the site before solar equipment begins to be placed. Fencing is beginning this week at the north solar array.

Site preparation and trash cleanup outside of the array areas remains to be completed, but the array areas have had fill spread and graded to cap these areas.

Thanks,

**JAKE KNUDTSON, P.E.** | CITY OF DES MOINES

Project Engineer | Engineering Department

(515) 208-4045

[DSM.city](https://www.dsm.city) | 400 Robert D. Ray Drive | Des Moines, Iowa 50309

---

**From:** Rath, Brian <[brian.rath@dnr.iowa.gov](mailto:brian.rath@dnr.iowa.gov)>  
**Sent:** Monday, August 7, 2023 9:45 AM  
**To:** Knudtson, Jake P. <[JPKnudtson@dmgov.org](mailto:JPKnudtson@dmgov.org)>  
**Cc:** Mindy Aust <[mindy@architecturema.com](mailto:mindy@architecturema.com)>; Luis Leon <[lleon@lleon.com](mailto:lleon@lleon.com)>; Grant Thompson <[gthompson@genus-la.com](mailto:gthompson@genus-la.com)>; Joseph Kostecki <[JKostecki@lleon.com](mailto:JKostecki@lleon.com)>; Sobiech-Munson, Ann C. <[ASMunson@dmgov.org](mailto:ASMunson@dmgov.org)>; Nathan Van Maanen <[nate@vanmaanenelectric.com](mailto:nate@vanmaanenelectric.com)>  
**Subject:** Re: [EXTERNAL]Solar Field Project Status

**CAUTION:** This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Thanks for the update.

**BRIAN L. RATH, P.E. | Environmental Engineer Senior**  
**P: 515-537-4051**

On Mon, Aug 7, 2023 at 9:28 AM Knudtson, Jake P. <[JPKnudtson@dmgov.org](mailto:JPKnudtson@dmgov.org)> wrote:

Hi Brian,

Site work on the project is moving along, with topsoil currently being brought in for the pollinator lawns at both array locations. Once that is complete, both array areas will be "capped" and ready for fencing and the electrical work to begin. Additional off-site fill is being used throughout the site to cap other trash areas discovered prior to final seeding.

Thanks for checking in

**JAKE KNUDTSON, P.E. | CITY OF DES MOINES**

Project Engineer | Engineering Department

(515) 208-4045

**DSM.city** | 400 Robert D. Ray Drive | Des Moines, Iowa 50309

---

**From:** Rath, Brian <[brian.rath@dnr.iowa.gov](mailto:brian.rath@dnr.iowa.gov)>  
**Sent:** Thursday, August 3, 2023 11:10 AM  
**To:** Knudtson, Jake P. <[JPKnudtson@dmgov.org](mailto:JPKnudtson@dmgov.org)>  
**Cc:** Mindy Aust <[mindy@architecturema.com](mailto:mindy@architecturema.com)>; Luis Leon <[lleon@lleon.com](mailto:lleon@lleon.com)>; Grant Thompson <[gthompson@genus-la.com](mailto:gthompson@genus-la.com)>; Joseph Kostecki <[JKostecki@lleon.com](mailto:JKostecki@lleon.com)>; Sobiech-Munson, Ann C. <[ASMunson@dmgov.org](mailto:ASMunson@dmgov.org)>; Nathan Van Maanen <[nate@vanmaanenelectric.com](mailto:nate@vanmaanenelectric.com)>  
**Subject:** [EXTERNAL]Solar Field Project Status

**CAUTION:** This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Jake - Good morning. Just dropping a note to see how the project is progressing. I know the weather and other issues are factors, so I was just wondering when the project is expected to wrap up. Please note, I have no regulatory concerns, just checking in. Thanks.

**BRIAN L. RATH, P.E. | Environmental Engineer Senior**  
**P: 515-537-4051**

On Tue, May 2, 2023 at 3:29 PM Rath, Brian <[brian.rath@dnr.iowa.gov](mailto:brian.rath@dnr.iowa.gov)> wrote:

Jake,

The DNR approves the attached plan revision for the Harriet Street facility. You may proceed with the placement of the soil. It is understood the soil will be placed to maintain positive drainage following placement and during operation.

If it is necessary to stockpile the soil over the old waste, it should be noted that depending on the depth of the stockpile, this can compress/compact the underlying waste. Also, this may cause leachate seeps by forcing the moisture in the waste (leachate) to the surface. If that is the case, the DNR will need to be notified and the seeps will need to be contained and plugged to keep the leachate from leaving the site or entering a stormwater system.

Please let me know if you have any questions.

**BRIAN L. RATH, P.E. | Environmental Engineer Senior**  
**P: 515-537-4051**

On Tue, May 2, 2023 at 2:14 PM Knudtson, Jake P. <[JPKnudtson@dmgov.org](mailto:JPKnudtson@dmgov.org)> wrote:

Thanks Brian, I'm forwarding this guidance document for the design team's information and use.

Regarding the stockpiled material, I've attached a rough sketch for stockpiled material location and approximately where it would be placed on-site. We will have a revised grading plan with much more detail, but I wanted to send this over to show the rough plan to grab and spread the nearby stockpiled material that needs to be moved soon.

If spreading the material is an issue, would it be acceptable to simply stockpile the material on our site and wait to spread/grade until we have an approved plan? Ideally we would spread it when moving over as well, and make final adjustments when we have that final approved plan. At this time the only work that would be occurring is moving available material on-site to be used when we have that final plan worked out.

Thanks,

**JAKE KNUDTSON, P.E. | CITY OF DES MOINES**

Project Engineer | Engineering Department

(515) 208-4045

**DSM.city** | 400 Robert D. Ray Drive | Des Moines, Iowa 50309

**From:** Rath, Brian <[brian.rath@dnr.iowa.gov](mailto:brian.rath@dnr.iowa.gov)>  
**Sent:** Tuesday, May 2, 2023 1:27 PM  
**To:** Knudtson, Jake P. <[JPKnudtson@dmgov.org](mailto:JPKnudtson@dmgov.org)>  
**Subject:** Re: 4/24/2023 Solar Field Meeting Follow-up

**CAUTION:** This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Jake,

Thanks for reaching out. No, we don't directly regulate the placement of soil. However, we require the submittal of any changes to the original approved plan. Therefore, we will need to see an updated grading plan prior to performing the work - even if the updated plan is a hand markup of the original plan stating where the soil is going to be placed and the range in thickness.

And as noted in our email from last week, please provide the DNR details of how exposed waste will be addressed, including the proposed minimum soil thickness over the waste.

For your reference, I've attached our guidance document that relates to the disruption or excavation of sanitary landfills or closed dumps. This has minor updates from the prior version that shouldn't specifically impact your project.

Feel free to call me if you have any questions.

**BRIAN L. RATH, P.E. | Environmental Engineer Senior**  
**P: 515-537-4051**

On Tue, May 2, 2023 at 11:56 AM Knudtson, Jake P. <[JPKnudtson@dmgov.org](mailto:JPKnudtson@dmgov.org)> wrote:

Hi Brian,

We're working to get an updated plan forward submitted for approval.

We have some soil stockpiled near this site that needs to move in the next couple of weeks for site logistics, and we were hoping to grab it for the solar field site as we know we will need fill brought in.

As we're waiting for reapproval before proceeding with the work, I wanted to confirm with you if bringing and spreading fill on-site would be acceptable prior to reapproval. No additional activities that would

bring up trash (trenching, stripping, excavating foundations) will take place until we receive that approval.

Thanks,

**JAKE KNUDTSON, P.E.** | CITY OF DES MOINES

Project Engineer | Engineering Department

(515) 208-4045

[DSM.city](#) | 400 Robert D. Ray Drive | Des Moines, Iowa 50309

---

**From:** Rath, Brian <[brian.rath@dnr.iowa.gov](mailto:brian.rath@dnr.iowa.gov)>

**Sent:** Thursday, April 27, 2023 8:47 AM

**To:** Knudtson, Jake P. <[JPKnudtson@dmgov.org](mailto:JPKnudtson@dmgov.org)>

**Cc:** Nathan Van Maanen <[nate@vanmaanenelectric.com](mailto:nate@vanmaanenelectric.com)>; Mindy Aust <[mindy@architecturema.com](mailto:mindy@architecturema.com)>; Joseph Kostecki <[JKostecki@tleon.com](mailto:JKostecki@tleon.com)>; Luis Leon <[lleon@tleon.com](mailto:lleon@tleon.com)>; Grant Thompson <[gthompson@genus-la.com](mailto:gthompson@genus-la.com)>; Sobiech-Munson, Ann C. <[ASMunson@dmgov.org](mailto:ASMunson@dmgov.org)>; Kristen Spina <[Kristen.L.Spina@imegcorp.com](mailto:Kristen.L.Spina@imegcorp.com)>; Becky Jolly <[becky.jolly@dnr.iowa.gov](mailto:becky.jolly@dnr.iowa.gov)>

**Subject:** Re: 4/24/2023 Solar Field Meeting Follow-up

**CAUTION:** This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Jake,

Thanks for sending the follow-up email. Below is our response to the vegetation burning question, related information to landfill gas, and a request for submitting changes to the approved plans to the Iowa DNR's Solid Waste Section (DNR) prior to proceeding with the work.

### **Vegetation Burning**

The DNR does not have the authority to address the burning of vegetation at this facility since it was operated and closed prior to permits or regulations being required. Therefore, it is up to the city as the responsible party for the facility to determine whether or not you should burn the proposed prairie. If the city desires to burn, the DNR recommends the city investigate how a burning program is planned and implemented as part of its decision-making.

### **Landfill Gas**

Although the DNR does not have the authority to require the city to monitor or control landfill gas, the DNR does recommend the city monitor and/or control as necessary since buried waste does produce landfill gas, including methane, and can accumulate to explosive levels in buildings, structures, electrical panels, piping/conduit, etc. that are built on, in, or near buried waste.



It should be noted that landfill gas can be highly corrosive to metals. Therefore, the landfill industry uses seal-offs, breakout boxes, and other methods to prevent landfill gas from entering electrical and control panels.

### Changes to Approved Plans

The DNR does not regulate the minimum thickness of soil that is required to be placed over the exposed waste. However, the thickness should be sufficient to maintain the integrity of the cover, which includes but it isn't limited to the establishment and maintenance of vegetation, erosion prevention, equipment/vehicle traffic related to the solar arrays, etc. The original plans did not indicate the required thickness. Please provide the DNR details of how exposed waste will be addressed, including the proposed minimum soil thickness over the waste.

If other changes to the original plans occur that may encounter additional waste, please submit those changes to the DNR as well prior to proceeding with the work.

If you have any questions, please call me at the number below.

Thanks,

Brian

**BRIAN L. RATH, P.E. | Environmental Engineer Senior**  
**P: 515-537-4051**

On Tue, Apr 25, 2023 at 3:53 PM Knudtson, Jake P. <[JPKnudtson@dm.gov](mailto:JPKnudtson@dm.gov)> wrote:

All, (I don't have everyone's contact information, so please forward to others who were there as needed)

To follow-up on the meeting we had on-site yesterday afternoon, below is a list of items discussed and next steps. Please weigh in on anything I am missing or any adjustments needed.

- There is trash/debris spread throughout the site, uncovered from the tree clearing operation. Large pieces of trash that are significantly exposed (tires for example) are to be removed. Rough grading of the site is difficult without continuing to pull up more, new trash.
- Area needs to be maintainable following the project. Native plantings as specified can grow in non-ideal situations, but large trash at surface needs to be dealt with to allow typical mowing maintenance to occur.
- Discussion over burning-maintenance of long natives and the impact of this occurring over an unregulated landfill.
  - **DNR to confirm if state restricts burning over an unregulated landfill in this manner.** This will affect Parks maintenance plan moving forward
  - Dealing with trash inside of array area + 10' buffer off of fence
  - **Design team to issue ASI to add cover "cap" around array footprints** with pollinator lawn seeding to provide a workable area for the area that is mow-able,

without debris interfering. ASI to request proposal for added work from contractor for City/Design team review prior to accepting.

- Design team to weigh in on if any alternative, more cost effective solutions are available.
- Grading in array sites to attempt to meet natural grades, limiting cut/fill required that will pull up more trash. Grading limits to be coordinated with ballast layout/ballast system requirements.
- **City investigating use of dirt adjacent to project site near Animal Control Facility.**
- **Dealing with trash outside of array area**
  - Absolute Group to be brought into conversation as it relates to their native seeding and maintenance requirements. Additional conversations needed for trash removal in these areas.
  - Limited/no grading to occur outside of array areas to avoid disturbing landfill.
- **Van Maanen to issue an RFI related to direct burial cable and concerns with security and differential settlement**
- Light pole base concerns brought up by Van Maanen. Possible credit discussed to move away from solar light options. **VM to propose alternative solution.**

Thanks

**JAKE KNUDTSON, P.E.** | CITY OF DES MOINES

Project Engineer | Engineering Department

(515) 208-4045

[DSM.city](https://www.dsm.city) | 400 Robert D. Ray Drive | Des Moines, Iowa 50309

---

 **Ltr\_2024\_0520\_IDNR Operational Plan Followup.pdf**  
1871K