REPORT OF COMPLIANCE EVALUATION INSPECTION
(INDUSTRIAL STORMWATER)

Big Ox Energy Siouxland LLC.
1616 D Avenue
South Sioux City, Nebraska 68776

General NPDES Permit: NER910002

BY
U.S. ENVIRONMENTAL PROTECTION AGENCY
REGION 7
ENVIRONMENTAL SCIENCES AND TECHNOLOGY DIVISION (ENST)
ENVIRONMENTAL FIELD COMPLIANCE BRANCH (EFCB)

ON
SEPTEMBER 10, 11, AND 14, 2018

INTRODUCTION

At the request of the Water Enforcement Branch (WENF), Water, Wetlands and Pesticides Division, a Compliance Evaluation Inspection (Industrial Stormwater) was conducted at the Big Ox Energy Siouxland facility in South Sioux City, Nebraska, on September 10, 11, and 14, 2018. The inspection was conducted under the authority of Section 308 of the Clean Water Act, as amended. It was conducted in accordance with the U.S. Environmental Protection Agency (EPA) Region 7 Standard Operating Procedures for Compliance Inspections (ENST SOP No. 2332). This narrative report presents the findings of the inspection. All other documentation not included as an attachment to this report has been submitted directly to the Region 7 Record Center.

PARTICIPANTS

Big Ox Energy Siouxland LLC.
- Desiree McCaslen, Director of Regulatory Compliance/Plant Manager
- Elijah Anderson, Production Superintendent
- Michelle Morgan, Lab Manager
- Jason Osbahr, Director of Research & Development and Engineering
- Rob Ernest, General Manager
- Michael Estess, Project Manager, Envirocon

Nebraska Department of Environmental Quality
- Nathan Kush, Environmental Quality Program Specialist
- Jason Windhorst, Environmental Quality Program Specialist/ Water Permits, NPDES

U.S. Environmental Protection Agency (EPA), Region 7

- Naji J. Ahmad, Environmental Engineer, ENST/EFCB
- Lantz Tipton, Environmental Scientist, WENF/WWPD

PROCEDURES

Messrs. Nathan Kush, Jason Windhorst and I arrived at the Big Ox Energy Siouxland LLC. (BOE) facility located at 1616 D Avenue in South Sioux City, Nebraska, at 9:50 a.m. on September 10, 2018. We met with Ms. Michelle Morgan and Mr. Elijah Anderson. We introduced ourselves, presented our credentials, and I explained the purpose and procedures of the industrial stormwater compliance evaluation inspection. These included: completing the National Pollutant Discharge Elimination System Industrial Stormwater Worksheet (Attachment 1); completing the Region 7 Multimedia Screening Checklist, Receipt for Documents and Samples Form, and the Confidentiality Notice; evaluating the Stormwater Pollution Prevention Plan (SWPPP); evaluating site inspections, employee training, self-monitoring records; evaluating stormwater management practices; completing the Region 7 Steam Nexus Sheet (Attachment 15), and conducting a facility walk-through with photographs (Attachment 6 and CD).

Soon after my introduction, I read but did not sign BOE's Visitor Safety Policy because the policy prohibits photography on the premises. I explained to Ms. Morgan and Mr. Anderson that taking photographs is essential during the inspection.

Mr. Elijah and Ms. Morgan informed us that Ms. Desiree McCaslen, Director of Regulatory Compliance/Plant Manager, was not on site, but would return the next day. I talked to Ms. McCaslen on the phone. I explained to her the purpose and procedures of the inspection and the documents I needed to review and complete my inspection. She mentioned that she will be back on September 11, 2018, to provide me with all the necessary documents. We agreed that I will do the walkthrough and review whatever documents are available on site. Ms. McCaslen granted me permission to take photos as necessary. On September 10, 2018, I received an email from Ms. McCaslen granting me written permission to take photos while I was on site (Attachment 5). Therefore, on September 11, 2018, I signed the Visitor Safety Policy (Attachment 5).

We started the inspection by discussing the facility's National Pollutant Discharge Elimination System (NPDES) General Permit NER910002 requirements (Attachment 2) and discussing the current and past site activities. We started reviewing the SWPPP folder that included the March 9, 2017, Stormwater Pollution Prevention Plan (Attachment 3), the benchmark monitoring reports of outfalls (Attachment 7), spill reports (Attachment 8), quarterly visual assessment reports (Attachment 9), facility and site inspection reports (Attachment 10), and annual reports (Attachment 11).

Soon after, Mr. Anderson and Ms. Morgan escorted Messrs. Kush, Windhorst and me on a visual inspection of the facility. We inspected four stormwater outfalls/discharge points, the outlet pipe/culvert that discharges from outfall #1 to the South Sioux City Municipal Separate Storm Sewer System (MS4), holding cells on the sides of the digesters building, above ground diesel fuel tank, small pump used by BOE to dewater process

material/sewage near outfall #2, scrap metal area, approximately 21 frac closed-top containers storing sewage to be hauled off site collected from a recent spill, a 30,000-gallon ferric chloride storage tank with evidence of overflow, compact area, two spill kits, truck loading area, roof top of the Digester/Equalization building, flare, gas cleanup area, and biogas to natural gas line station. When Messrs. Kush, Windhorst and I inspected the roof of the digesters building, Mr. Anderson informed us that electronic devices including cell phones and cameras are not allowed for safety issues and explosions prevention.

At the end of the day I discussed with Mr. Anderson and Ms. Morgan my preliminary site observations based on my review of records and visual inspection of the site. I also informed all attendees that I will return on September 11, 2018, to meet with Ms. McCaslen to discuss my preliminary site observations and review more records.

On September 11, 2018, Mr. Lantz Tipton and I returned to the facility. We met with Ms. McCaslen and Messrs. Anderson, Jason Osbahr, and Rob Ernest. We introduced ourselves, presented our credentials, and I explained the purpose and procedures of our industrial stormwater compliance evaluation inspection. We also discussed my preliminary site observations based on my visual inspection on September 10, 2018, and my review of the requirements of the NPDES permit and the SWPPP. In addition, BOE personnel mentioned and discussed other regulatory challenges facing BOE especially with the EPA and the Nebraska Department of Environmental Quality (NDEQ). At the end of the meeting I mentioned to all attendees that I will return on September 14, 2018, to conduct a formal exit meeting and issue a Notice of Potential Violation (NOPV).

On September 14, 2018, I returned to the BOE facility. I met with Ms. McCaslen and Mr. Anderson. I held a formal exit meeting and discussed my preliminary observations of the facility. I issued the NOPV (Attachment 12) that included twenty observations. In addition, I completed the Region 7 Multimedia Screening Checklist, Receipt for Documents and Samples Form, and the Confidentiality Notice (Attachment 14). BOE chose not to claim any confidential business information. I informed Ms. McCaslen and Mr. Anderson that I would communicate, to Ms. McCaslen, deficiencies that I may find during my review of the SWPPP and the NPDES permit upon my return to the office.

On September 11, 24, and 25, 2018, and on October 2, 2018, I received several emails from Ms. McCaslen as response to the NOPV (Attachment 13).

FACILITY DESCRIPTION

BOE is a waste-to-energy facility that is located on a 7-acre property. According to BOE's updated SWPPP (Attachment 4), BOE operates an anaerobic digester with an onsite preliminary wastewater treatment system. The majority of wastewater is delivered through two force mains. The wastewater is treated through a gas energy mixing process (GEM). The wastewater is then discharged to the municipal sanitary sewer of the City of South Sioux City, Nebraska, which then flows to the Sioux City wastewater treatment plant in Iowa. Solids from the GEM process and high-strength hauled-in wastes are processed through an anaerobic digesting system. Biogas produced from the digestion

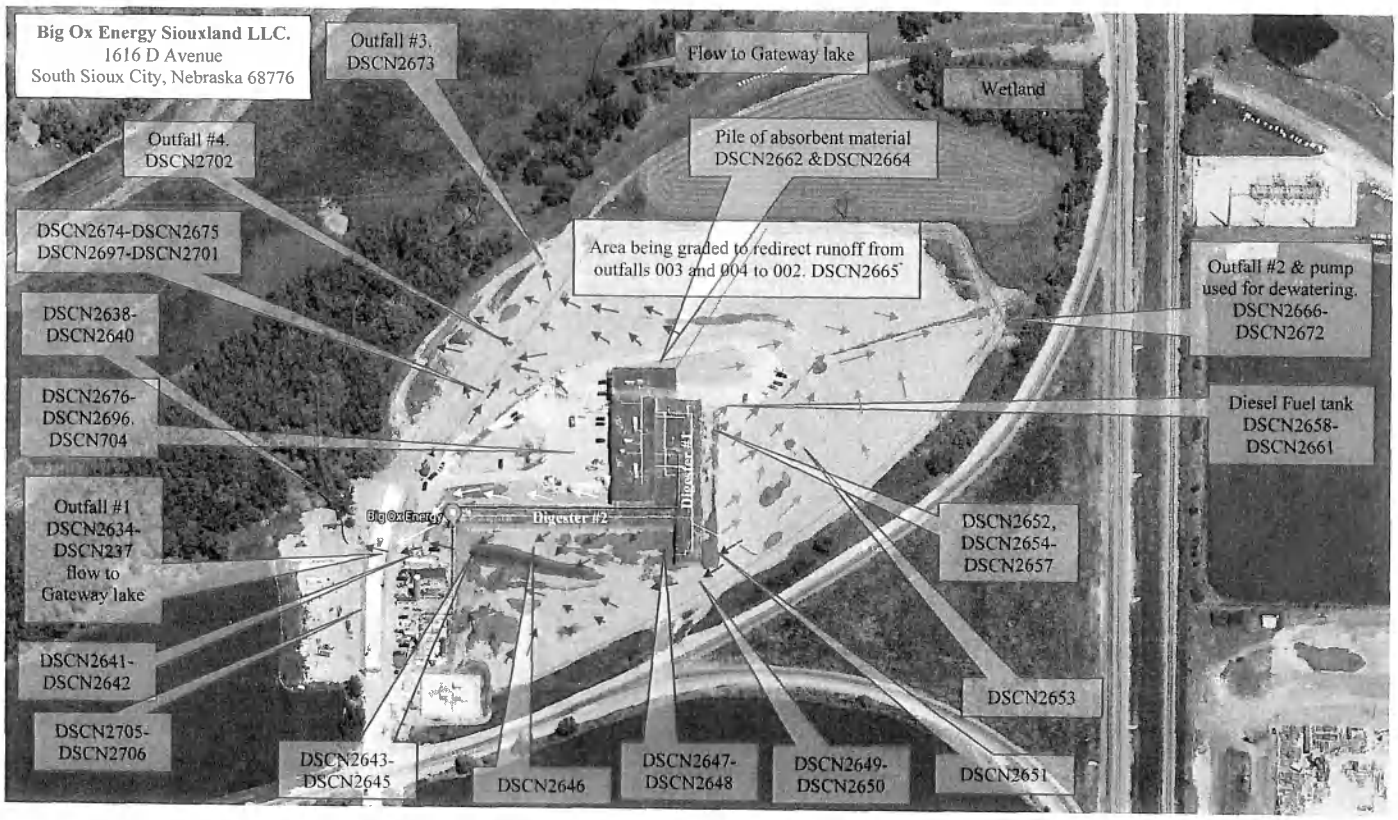
system is scrubbed, compressed, and injected into the northern natural gas pipeline. Resultant solids are dewatered and hauled-out as dewatered cake. The facility operates 24 hours a day/7- days a week.

The BOE facility is currently permitted under the Nebraska general NPDES Permit NER910002 for stormwater discharges associated with industrial processes that was issued by the Nebraska Department of Environmental Quality (NEDQ) on July 18, 2016 and expires on June 30, 2021 (Attachment 2).

At the time of my inspection, stormwater runoff from the site would discharge at four outfalls #1, #2, #3, and #4.

FACILITY DRAINAGE PATTERNS (FIGURE 1)

1. Surface water runoff from the area south of Digester #2 building would flow west and southwest toward outfall #1.
2. Runoff from the south section/corner of the area east of Digester #1 building would flow south then west toward outfall #1.
3. Outfall #1 is a stormwater manhole (DSCN2634-2637)(possibly part of the City's MS4) located in the east ditch of D Avenue. Flow from the manhole would gravity flow approximately 15 yards west via an 18-inch pipe under D Avenue and discharge into a grassy area (DSCN2638-2639). At this point, runoff would flow west approximately 100 yards through the grassy area and enter a heavily wooded area (DSCN2640). Surface runoff would then flow north approximately 700 yards into Gateway Lake.
4. Runoff from the large area east of Digester #1 building would flow northeast toward outfall #2.
5. Runoff from the northeast area of the property north of receiving building would flow south and southeast toward outfall #2.
6. Outfall #2 allows surface runoff to flow east approximately 85 feet through a grassy area into the wooded area along the west ditch of the BNSF Railroad. Surface runoff would continue to flow north through the wooded area approximately 100 yards into the wetlands.
7. Runoff from the northwest area of the property north of receiving building building would flow south and southwest toward outfall #3.
8. Runoff from the loading area/process area would flow west and northwest toward outfall #4.
9. Runoff from the area north of guard building would flow north along the property west fence toward outfall #4.
10. Surface runoff from outfalls #3 and #4 would follow the same pattern as outfall #1.
11. During significant surface runoff (significant rain event or major spills), surface runoff from the area south of Digester #2 building would potentially flow south toward the south fence and into ditch of the BNSF Railroad tracks south of the facility.


Big Ox Energy Siouxland LLC.
1616 D Avenue
South Sioux City, Nebraska 68776
Outfall #3. DSCN2673
Flow to Gateway lake
Wetland
Outfall #4. DSCN2702
Pile of absorbent material DSCN2662 &DSCN2664
DSCN2674-DSCN2675 DSCN2697-DSCN2701
Area being graded to redirect runoff from outfalls 003 and 004 to 002. DSCN2665
Outfall #2 & pump used for dewatering. DSCN2666-DSCN2672
DSCN2638-DSCN2640
DSCN2676-DSCN2696. DSCN704
Diesel Fuel tank DSCN2658-DSCN2661
Outfall #1 DSCN2634-DSCN237 flow to Gateway lake
Big Ox Energy
Digester #2
Digester #1
DSCN2652, DSCN2654-DSCN2657
DSCN2641-DSCN2642
DSCN2653
DSCN2705-DSCN2706
DSCN2643-DSCN2645
DSCN2646
DSCN2647-DSCN2648
DSCN2649-DSCN2650
DSCN2651

FINDINGS AND OBSERVATIONS

All findings and observations of this inspection concern BOE's status of compliance with the requirements of the General NPDES permit. These findings are based on my interviews with BOE personnel, my review of records provided to me by BOE personnel, and my visual observation of the site. All observations were discussed in detail with BOE personnel throughout the inspection on September 10, 2018, on September 11, 2018, and during the formal exit meeting on September 14, 2018. Attachment 6 includes all photos taken during the inspection on September 10 and 11, 2018, with the associated photo log (also included on a CD).

1. The NPDES permit requires BOE to develop and implement a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP that was given to me by BOE personnel was not signed. Therefore, I issued a Notice of Potential Violation (NOPV #1) for failure to sign the SWPPP. This same observation was included by the Environmental Protection Agency (EPA) during the January 10, 2017, Industrial User Sampling Inspection.

2. The NPDES permit requires BOE to develop a SWPPP that reflects the site's current activities. The SWPPP that was given to me by BOE personnel was out of date. For example, the SWPPP did not reflect current staff responsible for implementing it and did not include all outfalls or ongoing grading activities. Therefore, I issued NOPV #2 because BOE failed to keep the SWPPP current and reflect current site activities. This same observation was included by the EPA during the January 10, 2017 Industrial User Sampling Inspection.

3. I issued NOPV #3 because BOE failed to modify the SWPPP to reflect the site's current activities, especially the number and location of outfalls as required by the NPDES permit. During the site inspection, I observed four outfalls. Three of which were considered and marked by BOE as outfalls (outfalls #1, #2, and #3). However, the SWPPP only identified two outfalls (#1 and #2). In addition, there was another outfall which I called outfall #4 for the purpose of this inspection.

4. I issued NOPV #4 because BOE failed to implement good housekeeping practices as required by the SWPPP and Condition 2.1.2.2 of the NPDES permit. During the inspection I noticed and pointed out to BOE personnel the following locations where poor housekeeping practices were taking place:

    a. Unprotected pile of unidentified dark material, appeared to be processed sewage, located at the northeast corner of Digester #1 building (DSCN2662). The pile did not have containment. Only a small section of the pile was covered with plastic sheeting (DSCN2664). This pile was in the pathway of the runoff that leads to outfall #2.

    b. Container of black material that leaked and caused discoloration of the ground surrounding it (DSCN2676). The container was stored in front of frac container number A4267 near the loading area.

c. Open container that was filled with what appears to be proceed crushed cans (DSCN2677-2679). The container was leaking. Runoff from this container would flow toward outfalls #3 and #4.

d. Bags of white material waiting to be processed are stored outside without containment (DSCN2680). Some of the bags were ripped open and material was on the ground. Stormwater runoff can come in contact with this material and carry it toward outfalls #3 and #4.

e. Evidence of improper handling of contaminated soil can be seen throughout the site.

f. Hydraulic equipment was stored along the west fence, north of the guard office, in the pathway of outfalls #4 and #3 (DSCN2697-2700).

g. Evidence of improper handling of used buckets used in cleaning processed material (DSCN2703).

5. I issued NOPV #5 because BOE personnel failed to conduct adequate preventative maintenance. According to Condition 2.12.3 of the general NPDES permit and Condition 5.1.5.1., the permittee should describe in the SWPPP and implement preventative maintenance procedures such as inspections, testing, maintenance, and repairs of all industrial equipment and systems, and control measures to avoid leaks and spills. Based on my observations during the visual inspection of the site I noticed and pointed out to BOE personnel the following observations:

   a. The holding cells against the walls of the digester and process buildings were inadequate and were seeping sewage/process material which reached outfall #1 and outfall #2.

   b. Evidence of process material leaking and flowing down onto the grounds is very visible on the walls of Digester #1 and #2 buildings (DSCN 2646-2654).

   c. Evidence of deteriorating roofing material of the digester buildings, especially Digester #2 (DSCN2646 and DSCN2689).

   d. Evidence of significant spills are clearly visible at the walls of the 30,000-gallon ferric chloride tank and the smaller tank next to it (DSC2684).

   e. Evidence of dried sewage on the walls and the valves of some of the frac tanks (DSCN2691).

6. I issued NOPV #6 because BOE failed to conduct adequate routine site inspections as required by the NPDES permit and the SWPPP. Attachment 10 is a copy of the Facility & Site Inspection Report forms given to me by BOE personnel. Based on my review of those reports and comparing their contents to my site visual observation, it was apparent that those reports were not adequately completed and the information in

them contradicts what is on site. For example, one question in the report reads *"Are exterior of containers kept outside free of deposits?"* The inspector answered *"YES"* but, the answer should have been a "NO" because one of the frac containers I mentioned in 5.e above indicates otherwise. Another question reads "is the roof of the digesters free of debris?" The inspector answered "YES" but that also contradicted what I observed on the roof.

In addition, under Section 6.1.1. of the SWPPP, facility-wide inspections are to be done daily, and Section 6.1.2 requires weekly preventative maintenance inspections, which are not done.

7. I issued NOPV #7 because BOE failed to conduct: Quarterly Visual Assessment during the 4th quarter 2016, the 2nd and 4th quarters 2017, and Quarterly Facility & Site Inspection during the 4th quarter 2016 as required by the NPDES permit and the SWPPP.

8. NOPV #8 was issued because BOE failed to conduct employee SWPPP training as required. On September 10 and 11, 2018, BOE staff told me that they performed employee training. However, they were unable to produce such records. According to BOE personnel, BOE currently employs 43 full time employees (FTE) including truck drivers. BOE personnel added that out of the sixteen facility FTEs, eight are new hires.

9. Based on the number of maintenance and runoff control deficiencies I observed during my inspection, I concluded that major maintenance issues are being neglected for an extended period of time. Therefore, I issued NOPV #9 because BOE failed to take corrective action to eliminate site problems.

10. The NPDES permit and the SWPPP require quarterly benchmark monitoring of storm water discharges. Section 6.2.1 of the SWPPP lists the parameters and their benchmark concentrations as shown in Table 1 below.

Table 1, SWPPP Section 6.2.1 Quarterly Benchmark Concentration

Parameter	Concentration
Chemical Oxygen Demand (COD)	120 mg/l
Total Suspended Solids (TSS)	100 mg/l
Ammonia	10 mg/l

Table 2 includes all data collected from the outfalls and their associated results based on the records provided to me by BOE personnel on site (Attachment 7) and via email (CD2).

Table 2, BOE Quarterly Benchmark Concentration*

	Parameter Concentration (mg/l) (COD/TSS/Ammonia)			
Quarter	Outfall #1	Outfall #2	Outfall #3	Outfall #4
2016 4th	NA	NA	NA	NS
2017 1st	116/**/1.63	*176*/**/2.5		
2017 2nd	ND	ND		

2017	3rd	*69/160/0.175*	*50/105/1.18*	ND	NS
			*351/85.7/.425****		
2017	4th	NS	NS	NS	NS
2018	1st	*454/200/12.3*	Blocked	NS	NS
2018	2nd	*807/160/26.0*	ND	NS	NS
2018	3rd	*132/272/0.399*	Blocked	NS	NS

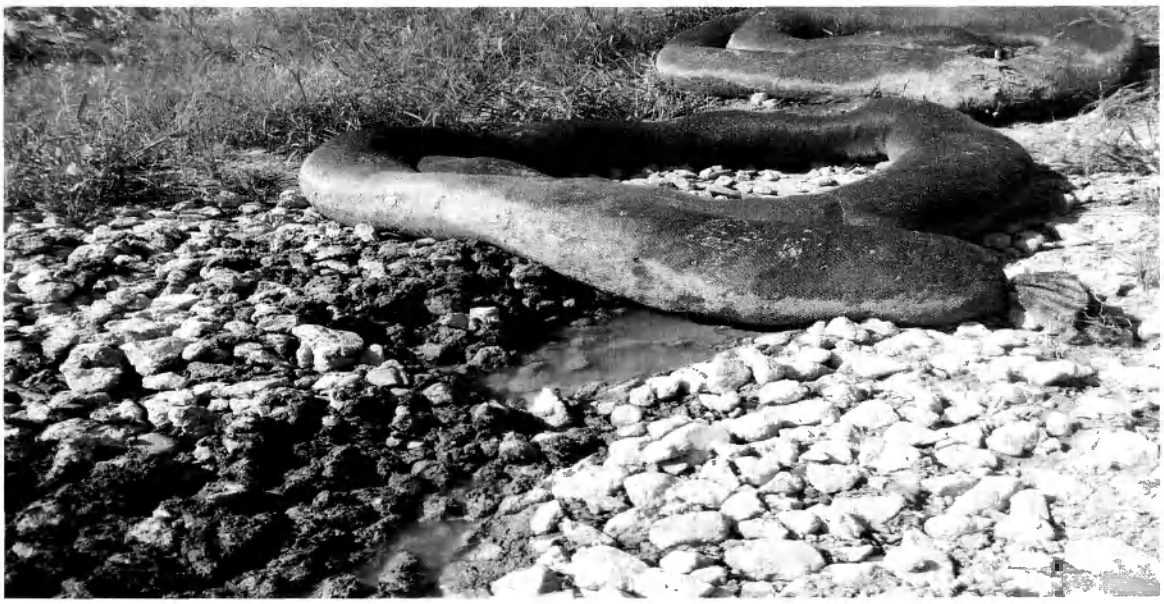
*Lab claims all sample received at lab at 5.7° C.
**BOE claims lab error. And lab claims sample received at lab at 5.7° C.
*** Sampled twice in one quarter
ND = No Discharge NS= No Sample collected

Based on the submitted data, I issued NOPV #10 because BOE failed to sample outfalls #1 and #2 quarterly and failed to sample outfalls #3 and #4.

11. I issued NOPV #11 because BOE failed to provide adequate controls at outfalls #1, #2, and #4. During the inspection I inspected four outfalls. Based on my observations I pointed out to BOE personnel that outfall #4 had no controls and outfalls #1 and #2 had inadequate controls as described below.

    a. The booms at outfall #1 were not installed correctly which allowed murky contaminated flow to leave the site at the outfall as shown in DSCN2636.

DSCN2636, Murky water flowing into outfall #1 beneath the inadequate controls



    b. At outfall #2 the boom and the silt fence were inadequately installed which allowed murky contaminated yellow flow to leave the site at the outfall as shown in DSCN2666.

    c. Outfall #4 had no controls and was not marked. There was clear evidence of contaminated yellow liquids and solids discharging as shown in DSCN2702.

DSCN2666, Murky water flowing into outfall #2 beneath the inadequate controls

DSCN2702, Standing contaminated process water at outfall #4

12. As mentioned above, the NPDES and the SWPPP require preventative maintenance as one of the good housekeeping practices to prevent process material from becoming exposed to stormwater. During the inspection I noticed and pointed out to BOE personnel evidence of overflow of process material from the roof of digesters #1 and #2 onto the grounds. Based on this observation I issued NOPV #12.

13. I issued NOPV #13 because poor handling practices of process material overflowing from the digesters and other spills were very visible all over the site. For example, one of the frac close-top-containers was leaking process material. The container was

placed at the edge of one of the holding cells, but it was discharging outside of the cell in the pathway of outfall #2. Another example is the ferric chloride tank overfilling incident were clear evidence of discoloration on the walls of the tank were very visible. Those observations are an indicator of BOE's failure to take corrective actions to cleanup and stop equipment and containers from leaking.

14. According to BOE personnel, as an effort to contain that large volume of liquid/process material caused by the major spill incident and other incidents, BOE built holding cells out of dirt against the walls of the digesters. The holding cells are temporary containment to keep process material from leaving the site and reaching the water of the U.S.

    I pointed out to BOE personnel several spots where the berms of the two holding cells against the south wall of digester #2 were seeping process material (DSCN2642-2648) that flowed into outfall #1 and discharged into the grassy area which leads to Gateway Lake.

    I also pointed out to them that the berms are poorly maintained which allowed the material to escape the cell (as shown in DSCN2648 below) and allowed significant vegetation to grow at the berms (DSCN2642).

DSCN2648, Poorly designed holding cell at the inner corner of both digesters

I also pointed out to BOE personnel the same observation of significant amount of process material leaked from the holding cell located at the north section of the east wall of digester #1 as showing DSCN2652 below. The material is in the pathway of outfall #2. Based on these observations, I issued NOPV # 14.

DSCN2652, Material leaking from a holding cell into the pathway of outfall#2

15. As an effort by BOE to cleanup and collect the spilled processed material, BOE brought to the site several closed-top frac containers. At the time of the inspection there was approximately 20 to 23 frac tanks. According to Mr. Anderson, seventeen of the frac containers are used to store stormwater and four are used to store process material.

    In addition, at the time of the inspection BOE was re-grading the topography of the north section of the site (DSCN2665) to re-direct surface runoff to flow east toward outfall #2 and minimize surface runoff from flowing west toward outfalls #3 and #4 and possibly eliminating both outfalls #3 and #4.

16. I issued NOPV #15 because during the inspection I observed several locations where there was clear evidence of process material (liquid) throughout the site and leaving the site at the three outfalls.

17. Based on my observations of the three outfalls I issued NOPV #16. Because of the poor housekeeping practices, poor preventative maintenance, and poor runoff controls, I observed discharge from the three outfalls as described below:

    a. I observed discharge at outfall #1 (DSCN2634-2637, DSCN2641-2642). The flow was murky and had an oily sheen (DSCN2636). The majority of the murky flow at outfall #1was coming from the inadequate holding cells at digester #2 (DSCN2635).

    b. Murky yellow flow was leaving the site at outfall #2 as shown in DSCN2666 above.

    c. Murky yellow flow with floatable sewage like material was leaving the site at outfall #4 as shown in DSCN2702 above.

DSCN2635, Murky fluids flowing into outfall #1

18. During my visual inspection of outfall #2, I noticed and pointed out to BOE personnel a pump and hoses that appeared to be used to pump process material off site to bypass outfall #2.

    I asked Ms. Morgan and Mr. Anderson why and what the pump is used for, they both replied that they were unaware of the pump being at this location (DSCN2669-2672). Mr. Anderson called Michael Estess, Project Manager, with Envirocon, (consultant for removal of raw sewage caused by the major spill).

    Mr. Estess claimed that the pump was used to pump clear rain water only. I pointed out to him that the green hose wrapped up around the pump had yellow colored material like the process material on the ground as shown in DSCN2671. Therefore, I issued NOPV #17 because of the unauthorized discharge of process material near outfall #2.

19. I was unable to investigate how far the hose extended beyond the east fence line because the pump and the hoses were removed and placed near the main gate as shown in DSCN2690 below.

20. During my inspection of the loading area I noticed a significant amount of discoloration on the walls of the ferric chloride tank (DSCN2684). I asked Ms. Morgan and Mr. Anderson if they were familiar of the cause of the discoloration. Ms. Morgan indicated that approximately two weeks before my inspection ferric chloride spilled on the ground because the tank was accidentally overfilled. I issued NOPV #18 because of the overflow of ferric chloride.

21. Ms. Morgan indicated that BOE usually reports spill incidents (Attachment 8). However, this incident was never reported to NDEQ or any other authorities. Ms.

Morgan did not provide me with any more information, such the duration of the overflow and the volume. Therefore, I issued NOPV #19 because BOE failed to report the ferric chloride spill from tank number TK-30430.

DSCN2671, Pump near outfall #2 used in unpermitted discharge

DSCN2690, The pump that was used for the unauthorized discharge

DSCN2684, Discoloration on the walls of the 30,000-gallon ferric chloride tank

22. On September 11, 2018 Mr. Tipton and I observed a significant amount of solids under BOE trucks parked on D Avenue (DSCN2706). The trucks were hauling sludge generated from BOE process. Therefore, I issued NOPV #20 because there was evidence of process material (sludge) from parked trucks on D Avenue near outfall #1.

DSCN2706, Sludge on public road caused by improper handling of process material

OTHER OBSERVATION

During my visual inspection of the site I noticed clear water flowing from the roof at the north end of digester #1 (DSCN2655 and 2656). I asked BOE personnel about the source of the water. Mr. Anderson mentioned that they are spraying water to keep the foam generated during the digesting process from overflowing onto the roof and spilling over onto the grounds. I asked Ms. Morgan and Mr. Anderson if I could visually inspect it. Later that day Mr. Anderson escorted Messrs. Kush, Windhorst and me to the digesters' roof. Mr. Anderson indicated that as a safety measure to prevent explosion, electronics and cameras are not allowed on the roof.

On the roof, I observed a spray of misty-water from a garden hose over an open hatch door. I also noticed a round opening about the size of a baseball in the door of closed hatch allowing digesting gases to escape. When I lowered the H_2S monitor close to the opening, the alarm on the monitor went off within a second. When I stepped back few feet it was reading approximately 70 parts per million (ppm).

I also noticed that Mr. Anderson was using an orange cone like device and placing it at several locations along the property fence line. I asked Mr. Anderson about the device and he mentioned that they are required to measure for H2S. I also noticed several boxes of the same device (approximately 6) at the visitor's office at the main gate.

CONCLUSION

1. It appears that most of the exposed process material onsite was the result of the June 13, 2018, major spill (Attachment 16). It also appeared that BOE was not focusing on clearing, cleaning, and removing the exposed material off the ground, but instead they were focusing on a grading project at the north section of the site. This poor decision by BOE caused the exposed process material from the June spill to continue leaving the site into the environment.

2. The SWPPP is outdated, not signed, inadequate, and does not reflect the site's current activities.

3. The site's structural and nonstructural stormwater controls including monitoring, inspections, and training, were nonexistent and determined to be inadequate in controlling sediment and stormwater runoff.

4. There was evidence of unauthorized discharge of exposed process material.

5. During the inspection we referred to digester #1 as digester #2. This became clearer to me after my review of the facility diagram.

6. Some documents received by BOE indicate that the facility is located at 1616 D Avenue in South Sioux City, Nebraska, and some indicate that the facility is located

at 1617 D Avenue in Dakota City, Nebraska. For this inspection I used 1616 D Avenue in South Sioux City, Nebraska, which is the address listed in the SWPPP.

7. I received several emails from Ms. Desiree McCaslen, Director of Regulatory Compliance/Plant Manager in response to the September 14, 2018, notice of potential violation.

Naji J. Ahmad
Environmental Engineer
December 12, 2018

ATTACHMENTS:

1. NPDES Industrial Stormwater Worksheet (6 pages)
2. NPDES permit (43 pages)
3. March 2017 SWPPP (44 pages)
4. Updated SWPPP (39 pages)
5. BOE Safety Policy and email allowing use of camera (4 pages)
6. Site photos and photo log (38 pages and CD)
7. Benchmark monitoring reports (20 pages)
8. Spill Reports (84 pages)
9. Quarterly Visual Assessment Reports (16 pages)
10. Facility and Site Inspection reports (69 pages)
11. Annual Reports (12 pages)
12. NOPV (1 page)
13. BOE Response to the NOPV (22 pages and CD)
14. USEPA receipt for Document and Samples, MM Checklist, CBI Notice (4 pages)
15. Stream Nexus sheet (2 pages)
16. NDEQ inspections (CD)