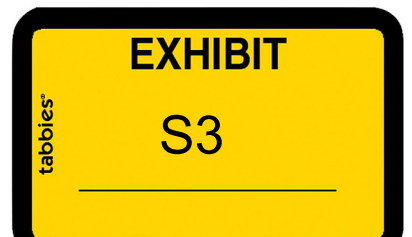


**BEFORE THE PUBLIC UTILITIES COMMISSION  
OF THE STATE OF SOUTH DAKOTA**

**IN THE MATTER OF THE APPLICATION OF NAVIGATOR HEARTLAND GREENWAY,  
LLC FOR A PERMIT UNDER THE SOUTH DAKOTA ENERGY CONVERSION AND  
TRANSMISSION FACILITIES ACT TO CONSTRUCT THE HEARTLAND GREENWAY  
PIPELINE IN SOUTH DAKOTA**

**DOCKET NO. HP22-002**

**Direct Testimony of DANR Spills  
On Behalf of the Staff of the South Dakota Public Utilities Commission  
May 25, 2023**



1 **Q. State your full name.**

2 A. Jaclyn McGuire

3 **Q. State your employer.**

4 A. South Dakota Department of Agriculture and Natural Resources (DANR)

5 **Q. Explain the specific program for which you work.**

6 A. I work in the Inspection, Compliance, and Remediation Program.

7 **Q. State what you do for this program.**

8 A. I am an Environmental Scientist II and team member for the Spills Cleanup Team in  
9 the Inspection, Compliance, and Remediation Program. I oversee the enforcement of  
10 South Dakota's laws and rules related to spill and release reporting, assessment, and  
11 cleanup of regulated substance releases. I am the state designated representative to  
12 the Region VIII Regional Response Team with responsibilities to coordinate with  
13 Federal agencies in the event of a hazardous material incident or disaster that  
14 threatens human health or the environment. I also coordinate with the Office of  
15 Emergency Management and other state agencies in the event of a disaster. A copy  
16 of my CV is attached as 'Exhibit\_JM-1'.

17 **Q. Explain the range of activities and duties your program covers and what you  
18 specifically do for the program.**

19 A. The Inspection, Compliance, and Remediation Program covers a wide range of  
20 activities including the regulation of underground and aboveground storage tanks; the  
21 regulation of industrial hemp; the regulation of pesticides, animal feed and remedy;  
22 fertilizer labeling, storage, and use; the state's Emergency Planning and Community  
23 Right to Know Act (EPCRA) program; the State's Brownfields program and the  
24 state's spill cleanup program. I work in the Spills Cleanup Team. When a release

25 occurs, I evaluate information about the release to identify and name a responsible  
26 person. I direct environmental contractors and the responsible person to perform  
27 emergency response activities, assessment, and cleanup activities associated with  
28 spills, releases, and un-permitted discharges. I am responsible for the evaluation of  
29 information and data on spills and releases to ensure that the cleanup meets state  
30 requirements.

31 **Q. On whose behalf was this testimony prepared?**

32 A. This testimony was prepared on behalf of the Staff of the South Dakota Public  
33 Utilities Commission (Staff).

34 **Q. Are there any state environmental laws and rules that would apply to a release  
35 from a carbon dioxide pipeline?**

36 A. Yes, SDCL ch. 34A-12, Regulated Substance Discharges, and ARSD art. 74:34,  
37 Regulated Substance Discharges, would apply. Depending on the location of the  
38 release, SDCL ch. 34A-2 Water Pollution Control, ARSD art. 74:51 Surface Water  
39 Quality, ARSD art. 74:52 Surface Water Discharge Permits, and/or ARSD art. 74:54  
40 Groundwater Quality may also apply.

41 **Q. Which of those laws or rules do you personally work with?**

42 A. All of the above. In the event of water pollution, I also work with staff in the  
43 department's Water Quality Program.

44 **Q. Would DANR be involved in the event of a release from the carbon dioxide  
45 pipeline? Please explain.**

46 A. Yes, carbon dioxide is considered a regulated substance under SDCL 34A-12-1(8),  
47 constituting as a solid waste as defined by SDCL 34A-6-1.3(17). Any release of a  
48 regulated substance falls under the authority of DANR.

49 **Q. Are there any thresholds for remediation of carbon dioxide from soil,**  
50 **groundwater, or water? Please explain.**

51 A. DANR does not have specific thresholds for carbon dioxide. The State does have  
52 standards for other parameters in groundwater such as pH, heavy metals, total  
53 dissolved solids, dissolved oxygen, and more. These parameters are detailed in the  
54 State's groundwater quality standards. See ARSD art. 74:54, Groundwater Quality.  
55 DANR also has drinking water standards and surface water quality standards that  
56 must be met. See ARSD ch. 74:04:12 and ARSD art. 74:51, respectively. In addition  
57 to those standards, typically cleanup is conducted to meet federal guidance.

58 **Q. What kind of remediation activities are conducted in response to a carbon**  
59 **dioxide release into soil?**

60 A. The remediation activities depend on the soil type, previous conditions of the soil,  
61 and the amount of carbon dioxide released. Remediation activities could include  
62 tilling the soil to release trapped carbon dioxide or applying a lime additive or sodium  
63 bicarbonate to increase the pH in the soil. Remediation is also risk-based and  
64 dependent on the presence of nearby receptors.

65 **Q. What kind of remediation activities are conducted in response to a carbon**  
66 **dioxide release into groundwater?**

67 A. The remediation activities would be risk-based and would depend on the presence of  
68 nearby receptors. Contaminated groundwater can be treated to adjust the pH or may  
69 be filtered to remove contaminants.

70 **Q. What kind of remediation activities are conducted in response to a carbon**  
71 **dioxide release into surface water?**

72 A. The remediation activities would depend upon the attainable beneficial uses of the  
73 water. Contaminated water can be treated to adjust the pH and aerators can be  
74 installed to increase oxygen inputs into the system.

75 **Q. What are the leak size requirements for a reportable spill or release from a**  
76 **carbon dioxide pipeline?**

77 A. According to SDCL 34A-12-9, any discharge of a regulated substance must be  
78 reported to DANR immediately, regardless of quantity.

79 **Q. Are there requirements for reporting a suspected discharge from a carbon**  
80 **dioxide pipeline?**

81 A. Yes. Suspected discharges must be reported to DANR within 24 hours after the  
82 discharge is suspected when certain conditions exist. See ARSD § 74:34:01:05.

83 **Q. Are you aware of any carbon dioxide releases that cannot be remediated and/or**  
84 **had long-term environmental impacts?**

85 A. No.

86 **Q. Who is obligated to remediate a release from a carbon dioxide pipeline?**

87 A. The responsible person for the release is obligated to perform remediation. If the  
88 person responsible for the discharge cannot be determined, the owner of the  
89 property or the operator of the tank at the time of the discharge is designated as the  
90 responsible person under SDCL 34A-12-16. In typical pipeline releases, the owner of  
91 the pipeline is responsible for the remediation of the release. However, if a landowner  
92 causes a release from the pipeline, they could be considered the responsible person  
93 under SDCL 34A-12-1(10).

94 **Q. Is there the potential for carbon dioxide to enter wells? If yes, what types of**  
95 **remediation methods would be used to remove carbon dioxide from impacted**  
96 **wells?**

97 A. Yes. The greater water quality concern following a carbon dioxide release is the  
98 possible lowering of the pH of the water and the potential for mobilization of heavy  
99 metals or other contaminants already present. Remediation activities may be based  
100 instead on treating the pH or removing other contaminants instead of removing  
101 carbon dioxide, which is highly soluble in water. Options include treating the  
102 groundwater to adjust the pH or filtering the well water to remove contaminants.

103 **Q. What if you can't achieve remediation of a well?**

104 A. If remediation is not feasible, the responsible person may be required to supply the  
105 well owner/user with an alternate source of drinking water. The well can be plugged  
106 and a new well can be drilled in a different location, deeper in a different formation.  
107 Or the responsible person can get the well user on a rural or city water supply.

108 **Q. What is the extent of landowner involvement in remediation?**

109 A. This depends on the specific situation. Some landowners choose to be involved in  
110 the cleanup, but most allow the department to work with the responsible person to  
111 get the cleanup work performed to state standards. If requested by the landowner,  
112 the department may copy the landowner on all written correspondence with the  
113 responsible person. If the landowner wishes to be involved with the cleanup,  
114 meetings may be held to address the concerns of landowners or other interested  
115 parties. DANR will provide copies of all public documents to the landowner if the  
116 landowner wishes to receive them.

117 **Q. Does DANR have the resources to deal with a release from a carbon dioxide**  
118 **pipeline such as the one Navigator proposes?**

119 A. Yes. DANR has the resources necessary to oversee the assessment and clean up  
120 for a carbon dioxide release from the Navigator pipeline, should one occur and  
121 require a cleanup. DANR manages the State's regulated substance response fund  
122 with sufficient resources to initiate corrective actions if a release occurs and the  
123 pipeline company is unable or unwilling to perform the required response activities.

124 **Q. Does Navigator's proposed carbon dioxide pipeline place any additional**  
125 **burden on your program?**

126 A. Navigator's proposed carbon dioxide pipeline does not place any additional burden  
127 on the Inspection, Compliance, and Remediation Program.

128 **Q. Please explain the State's Regulated Substance Response Fund that may be**  
129 **available to help fund a remediation project if the responsible person is unable**  
130 **or unwilling to perform the work.**

131 A. An explanation of the South Dakota Regulated Response Fund is attached as  
132 'Exhibit\_JM-2'.

133 **Q. Do you have any other information you believe the Commission and the public**  
134 **will find useful?**

135 A. The Inspection, Compliance, and Remediation Program has extensive staff  
136 experience overseeing the assessment and remediation of a variety of spill incidents  
137 in soil, surface water, and groundwater mediums.

138 **Q. Does this conclude your testimony?**

139 A. Yes.

140

## JACLYN MCGUIRE

SOUTH DAKOTA DEPARTMENT OF AGRICULTURE AND NATURAL RESOURCES  
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PIERRE, SD 57501  
605-773-3296  
JACLYN.MCGUIRE@STATE.SD.US

### EDUCATION

#### Bachelor of Science

*University of Wisconsin - Madison*

Sept 2007 – May 2011

- Major: Genetics, Zoology
- Certificate: Integrated Liberal Studies

#### Graduate Work Toward Master of Science

*Montana State University*

Jan 2014 – Dec 2016

- Fisheries and Wildlife Management

### EXPERIENCE

#### **Environmental Scientist**

July 2019 – Present

*Department of Agriculture and Natural Resources – Pierre, SD*

- Investigate, analyze, and determine if cleanups have met state requirements.
- Oversee and manage all data within the Environmental Events Database.
- Analyze and review reports to identify potential sources of contamination and determine their risk to the environment and human health.
- Coordinate spill site visits including soil and water sample collection.
- Prepare summaries and technical reports to determine compliance of state rules and regulations in relation to regulated substance releases.
- State representative for the Region VIII Regional Response Team.
- Represent the Department lobbying on behalf of the state's Industrial Hemp Program during legislative session.
- Primary contact for after-hours reports of regulated substance releases.

#### **Laboratory Assistant**

Jan 2017 – June 2018

*Texas State University – San Marcos, TX*

- Completed monthly field sampling trips collecting water quality samples analyzing conductivity, turbidity, and chlorophyll content.
- Designed and completed independent laboratory project about mussel movement in



response to dewatering events.

- Performed microscopic analysis of juvenile mussels and mussel gonad fluids.
- Edited and published results from the mussel movement project in *Freshwater Biology*.
- Collaborated with local state and federal agencies and other universities to collect mussels and eDNA water samples.
- Entered data for multiple projects for various students and organized data entry databases.
- Organized laboratory and inventoried items in the lab.

**Graduate Research Assistant**

Jan 2014 – Dec 2016

*Montana State University – Bozeman, MT*

- Performed laser ablation inductively coupled plasma mass spectrometry on fish otoliths, fin rays, and scales.
- Collected water samples for conductivity and analyzed isotope concentrations with a mass spectrometer.
- Presented thesis findings at the Western Division of American Fisheries Society
- Wrote project thesis, proposals, and annual reports and designed thesis research project.
- Drafted budget proposals and completed IACUC reports for my project.
- Coordinated and organized field and lab work with multiple agencies.
- Created maps using ArcGIS.
- Supervised volunteer undergraduate students in laboratory setting.

**Graduate Teaching Assistant**

Jan 2016 – Dec 2016

*Montana State University – Bozeman, MT*

- Prepped laboratory experiments including making agar, chemical solutions, and ran PCR samples.
- Taught three, two-hour long sections with 20 students weekly.
- Covered introductory biology topics ranging from photosynthesis to gel electrophoresis including lectures and hands-on experiments.
- Held office hours weekly and provided support for students.

**Aquatic Habitat Technician**

May 2013 – Oct 2013

*Wyoming Game and Fish Department – Laramie, WY*

- Taught water chemistry analysis to students with Trout Unlimited.
- Assisted in stream habitat restoration construction using survey equipment.
- Measured water levels and flow of irrigation ditches.

- Completed data entry in state agency databases.
- Created photo point catalogue of habitat restoration project.
- Created maps and analyzed data in All Topo V7 Pro.
- Performed backpack electroshocking and boat electroshocking to analyze fish populations in streams and lakes, respectively.

**Brucellosis Technician**

Sept 2013 – Dec 2013

*Wyoming Game and Fish Department – Cody, WY*

- Collected tissue samples from harvested elk and deer for brucellosis analysis.
- Communicated to the public about wildlife diseases.
- Assisted hunters in the field with questions about department policies.

**Fisheries Technician**

Jan 2013 – May 2013

*Wyoming Game and Fish Department – Cody, WY*

- Aged bony structures of walleye including otoliths and scales.
- Performed statistical analyses with fisheries population data.
- Created maps and analyzed data in All Topo V7 Pro.
- Organized applicant information for fisheries technicians and contacted references of applicants.

**Fisheries Technician**

June 2012 – Oct 2012

*National Park Service – Yellowstone National Park, WY*

- Deployed and retrieved gill nets to collect invasive Lake Trout in Yellowstone Lake.
- Led crews in daily gill netting operations including operating large boats greater than 30 feet, ensuring crew safety, deciding where to deploy nets, and managing the daily schedule.
- Repaired gill nets and catalogued inventory.
- Completed data entry in agency databases.
- Reviewed and edited Arc GIS maps showing gill net placements.

**Sea Lion Observer Intern**

Jan 2012 – May 2012

*Army Corps of Engineers – Cascade Locks, OR*

- Observed and recorded sea lion feeding behavior including species identification of prey via binoculars.
- Assisted with tagging, branding, and necropsies of sea lions.
- Created and catalogued identification markers for individual sea lions present at Bonneville Dam.
- Communicated to the public and represented the agency regarding observation efforts.

**Fisheries Intern**

Aug 2011 – Oct 2011

*National Park Service – Yellowstone National Park, WY*

- Deployed and retrieved gill nets to collect invasive Lake Trout in Yellowstone Lake.
- Performed barge and backpack electroshocking to remove nonnative invasive species in small, high elevation creeks.
- Repaired gill nets and catalogued inventory.
- Completed data entry in agency databases.

CERTIFICATIONS

South Dakota Petroleum Release Remediator	March 2023
• South Dakota Board of Technical Professions	
First Aid, Adult CPR/AED	February 2022
• Red Cross	
Leadership SD – State Government	December 2021
• Leadership South Dakota	
40 Hour HAZWOPER Certification	October 2019
• TIS Environmental Inc.	
Incident Command System Training – 100.C, 200.C, 700.B	August 2019
• Department of Homeland Security	
Electrofishing Safety	June 2016
• Montana Fish, Wildlife, and Parks Department	
Motorboat Operators Certification Course	June 2012
• Department of the Interior	

AWARDS

- 2020 South Dakota State Employee Recognition
- 2015 Jim Belsey Scholarship
- 2011 Towell Creativity Award and Scholarship

## **REGULATED SUBSTANCE RESPONSE FUND**

### **DEPARTMENT OF AGRICULTURE AND NATURAL RESOURCES**

#### **CONTACTS:**

**Hunter Roberts, Secretary**  
**Kent Woodmansey, Director**

#### **PURPOSE**

The money in the Regulated Substance Response Fund is continuously appropriated to provide funding for the cleanup of regulated substance discharges. The Secretary of the Department of Agriculture and Natural Resources may expend funds from the response fund to provide for the costs of investigations, emergency remedial efforts, corrective actions, and managerial or administrative activities associated with such activities.

#### **SUMMARY**

In 1988, SDCL 34A-12-3 created the Regulated Substance Response Fund. The fund was created through an appropriation from general fund, a one-time contribution from the petroleum release compensation fund, and a temporary pesticide registration fee.

Ongoing deposits into the fund come from: money recovered by the State in any civil action or administrative proceeding based upon violation of the State's environmental statutes or upon damage to the environment, including actions for administrative expense recoveries, civil penalties, compensatory damages, and money paid pursuant to any agreement, stipulation, or settlement in such actions or proceedings and interest attributable to investment of the money in the response fund.

Before the fund can be used, there must be a discharge of a regulated substance, but then the money is continuously distributed from the fund to pay for the cleanup of regulated substance discharges. The department may file civil actions or liens on property owned by the responsible person to recover costs.

#### **REQUIREMENTS**

The Secretary of the Department of Agriculture and Natural Resources may expend funds from the response fund to provide for the costs of investigations, emergency remedial efforts, corrective actions, and managerial or administrative activities associated with such activities. For a substance to be classified as a regulated substance, it must meet the definition set forth in either statute or rule. SDCL 34A-12-1(8) exempts sewage and sewage sludge from being classified as a regulated substance.

The Secretary's use of the response fund is outlined in SDCL 34A-12-4. It provides in pertinent part as follows:

- (1) In the case of an investigation, when the secretary determines that a discharge requiring an emergency remedial effort may have occurred and that the general operating budget of the department is not adequate to cover the costs of the necessary investigatory activities.
- (2) In the case of an emergency remedial effort, when the secretary determines that a discharge has occurred and that the corrective actions shall be immediately undertaken to protect an imminent threat to the public health or safety or to contain a discharge which, if not immediately contained, shall in time pose a significantly greater threat to public health or safety or to contain a discharge which, if not immediately contained, shall in time pose a significantly greater threat to public health or safety or to the environment of this state if such action is not immediately taken;
- (3) In the case of a discharge not of an emergency nature when the secretary determines that a discharge has occurred, that a responsible party or liability fund capable of performing the corrective actions either cannot be identified or refuses to undertake corrective actions, and that corrective actions shall be undertaken to protect the public health, safety, welfare, or environment of the state.

SDCL 34A-12-4.

SDCL 34A-12-12 sets forth that the person who caused the discharge of a regulated substance is strictly liable for the corrective action costs expended by the department. All corrective actions costs expended shall constitute a lien on all property owned by the responsible person.

## STATUTES

### **34A-12-3. Regulated substance response fund established--Purpose--Source of funds--Continuous appropriation--Informational budget--Annual legislative review.**

There is hereby established in the state treasury an operating fund to be known as the regulated substance response fund for the purpose of providing funds for the clean up of regulated substance discharges. Funds from the following sources shall be deposited into the response fund:

- (1) Direct appropriations to the response fund from the general fund;
- (2) Money, other than criminal fines assessed in criminal actions, recovered by the state in any action or administrative proceeding based upon violation of the state's environmental statutes or upon damage to the environment, including actions for administrative expense recoveries, civil penalties, compensatory damages, and money paid pursuant to any agreement, stipulation, or settlement in such actions or proceedings;
- (3) Interest attributable to investment of the money in the response fund;
- (4) Money received by the department in the form of gifts, grants, reimbursements, or appropriations from any source intended to be used for the purposes of the response fund.

All money in the response fund is continuously appropriated for the purposes specified in § 34A-12-4. All money received by the department for the response fund shall be set forth in an informational budget pursuant to § 4-7-7.2 and be annually reviewed by the Legislature.

**34A-12-4. Expenditure of funds by secretary--Grounds for expenditures.**

When necessary in the performance of the secretary's duties under §§ 23A-27-25, 34A-1-39, 34A-2-75, 34A-6-1.4, 34A-6-1.31, 34A-11-9, 34A-11-10, 34A-11-12, 34A-11-14, 34A-12-1 to 34A-12-15, inclusive, 45-6B-70, 45-6C-45, 45-6D-60, and 45-9-68 and Title 34A relative to discharges, the secretary may expend funds from the response fund to provide for the costs of investigations, emergency remedial efforts, corrective actions, and managerial or administrative activities associated with such activities. The secretary's use of the response fund shall be based upon the following:

- (1) In the case of an investigation, when the secretary determines that a discharge requiring an emergency remedial effort may have occurred and that the general operating budget of the department for such purposes is not adequate to cover the costs of the necessary investigatory activities;
- (2) In the case of an emergency remedial effort, when the secretary determines that a discharge has occurred and that corrective actions shall be immediately undertaken to protect an imminent threat to the public health or safety or to contain a discharge which, if not immediately contained, shall in time pose a significantly greater threat to public health or safety or to the environment of this state than if such action is not immediately taken;
- (3) In the case of a discharge not of an emergency nature when the secretary determines that a discharge has occurred, that a responsible party or liability fund capable of performing the corrective actions either cannot be identified or refuses to undertake corrective actions, and that corrective actions shall be undertaken to protect the public health, safety, welfare, or environment of the state.

**34A-12-12. Strict liability for costs of corrective action.**

Any person who has caused a discharge of a regulated substance in violation of § 34A-12-8 is strictly liable for the corrective action costs expended by the department pursuant to §§ 23A-27-25, 34A-1-39, 34A-12-1 to 34A-12-15, inclusive, 45-6B-70, 45-6C-45, 45-6D-60, and 45-9-68.

**CURRENT STATUS**

The Department of Agriculture and Natural Resources currently has six (6) contracts in place with environmental consulting firms to provide response capabilities. These contracts are 4-year contracts with extension provisions. Currently the department has contracts with the following firms: GeoTek Engineering & Testing Services (Sioux Falls); Terracon Consultants, Inc.; WSP USA Inc.; Antea Group; Houston Engineering Inc. (Sioux Falls); and American Engineering Testing Services (Pierre and Rapid City).