



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**
REGION I
475 ALLENDALE ROAD, SUITE 102
KING OF PRUSSIA, PA 19406-1415

June 10, 2022

EA-22-029

Kevin Kosko, President/Owner
K2 Environmental, LLC
120 N. Market St.
Lisbon, OH 44432

SUBJECT: K2 ENVIRONMENTAL, LLC - NRC INSPECTION REPORT 99990007/2022001

Dear Mr. Kosko:

This letter refers to the U.S. Nuclear Regulatory Commission (NRC) inspection conducted remotely from March 11, 2022, through April 4, 2022, with in-office review through May 11, 2022. The inspection consisted of an examination of activities conducted within the jurisdiction of the NRC as they related to NRC-licensed byproduct material. Within this area, the inspection consisted of a selected examination of representative records and interviews with personnel. The preliminary inspection findings were discussed with you following the conclusion of the initial technical review on March 25, 2022. A final exit briefing was conducted telephonically with you on May 11, 2022. The enclosed reports present the results of the inspection (Enclosure 1).

Based on the results of the inspection, an apparent violation was identified and is being considered for escalated enforcement action in accordance with the NRC Enforcement Policy, which can be found at the NRC's website at <http://www.nrc.gov/about-nrc/regulatory/enforcement/enforce-pol.html>. The apparent violation, as described in Enclosure 1, involved K2 Environmental, LLC's failure to file for reciprocity or receive a specific license from the NRC prior to performing work in NRC jurisdiction. Specifically, on July 20, 25, and August 18, 2018, and February 10, 28, and March 2, 2021, K2 Environmental, LLC, performed waste characterization, waste processing, and waste brokerage services on behalf of a client in West Virginia, a non-Agreement State, without either receiving a general license for reciprocity with its State of Ohio radioactive materials license or receiving an equivalent specific license with the NRC.

Since the NRC has not made a final determination in this matter, a Notice of Violation is not being issued for this apparent violation at this time. In addition, please be advised that the number and characterization of the apparent violation may change as a result of further NRC review.

Before the NRC makes its enforcement decision regarding the apparent violation, we request that you provide additional information on corrective actions planned. Specifically, please describe how K2 Environmental, LLC, will determine what jurisdiction it is working in and whether or not it needs to file for reciprocity with the NRC prior to performing work. The written response should also include: (1) the reasons for the apparent violation or, if contested, the basis for disputing the apparent violation; (2) the corrective steps that have been taken and the results achieved; (3) the corrective steps that will be taken; and (4) the date when full

compliance will be achieved. In presenting your corrective actions, you should be aware that the promptness and comprehensiveness of your actions will be considered in assessing any civil penalty for the apparent violations. The guidance in NRC Information Notice 96-28, "Suggested Guidance Relating to Development and Implementation of Corrective Action," may be helpful in preparing your response. You can find the Information Notice on the NRC website at: <http://pbadupws.nrc.gov/docs/ML0612/ML061240509.pdf>.

The written response should be sent to the NRC within 30 days of the date of this letter. Your response may reference or include previously docketed correspondence, if the correspondence adequately addresses the required response. You should clearly mark the response as a "Response to an Apparent Violation in NRC Inspection Report (999-90007/2022-001); EA-22-029," and send it to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001, with a copy mailed to Mr. Blake D. Welling, Director, Division of Radiological Safety & Security, U.S. Nuclear Regulatory Commission Region I, 475 Allendale Road, King of Prussia, PA, 19406, and emailed to R1Enforcement@nrc.gov. If an adequate response is not received within the time specified or an extension of time has not been granted by the NRC, the NRC will proceed with its enforcement decision.

In lieu of providing this written response, you may choose to provide your perspective on this matter, including the significance, cause, and corrective actions, as well as any other information that you believe the NRC should take into consideration by requesting a predecisional enforcement conference (PEC) to meet with the NRC.

If you choose to request a PEC, the conference will afford you the opportunity to provide your perspective on these matters and any other information that you believe the NRC should take into consideration before making an enforcement decision. The decision to hold a PEC does not mean that the NRC has determined that a violation has occurred or that enforcement action will be taken. This conference would be conducted to obtain information to assist the NRC in making an enforcement decision. The topics discussed during the conference may include information to determine whether a violation occurred, information to determine the significance of a violation, information related to the identification of a violation, and information related to any corrective actions taken or planned.

If a PEC is held, the PEC will be open to public observation in accordance with Section 2.4, Participation in the Enforcement Process, of the NRC Enforcement Policy. The current Enforcement Policy is included on the NRC's Web site at <http://www.nrc.gov/about-nrc/regulatory/enforcement/enforce-pol.html>. In addition, the NRC may issue a press release to announce the time and date of the conference. **If you decide to participate in a PEC, please contact Christopher Cahill at (610) 337-5108 or via email at Christopher.Cahill@nrc.gov within 10 days of the date of this letter.** A PEC should be held within 30 days of the date of this letter.

In accordance with 10 CFR 2.390 of the NRC's "Agency Rules of Practice and Procedure," a copy of this letter, its enclosure, and your response, if you choose to provide one, will be made available electronically for public inspection in the NRC Public Document Room and from the NRC's Agencywide Document Access and Management System (ADAMS), accessible from the NRC website at <http://www.nrc.gov/reading-rm/adams.html>. To the extent possible, your response should not include any personal privacy or proprietary information so that it can be made available to the public without redaction.

If you have any questions concerning this matter, please contact Mr. Jason vonEhr of my staff at (610) 337-5256.

Sincerely,

Blake D. Welling, Director
Division of Radiological Safety and Security

Docket No. 99990007
License No. OH-03219150001

Enclosure:
NRC Inspection Report 99990007/2022001

cc (w/Enclosure):
Gene Phillips, State of Ohio
Stephen James, State of Ohio
Tera Patton, State of West Virginia

K2 ENVIRONMENTAL, LLC - NRC INSPECTION REPORT 99990007/2022001 DATED JUNE 10, 2022

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SUNSI Review: ADAMS: Non-Publicly Available Non-Sensitive Keyword:
 By: JEV Yes No Publicly Available Sensitive

OFFICE	RI:DRSS	RI:ORA	RI:DRSS	RI:DRSS	NMSS	OE
NAME	JvonEhr	RMcKinley	CGCahill	BDWelling	M Burgess	J Peralta
SIGNATURE	JEV	RRM	CGC	BDW		
DATE	5/24/2022	05/31/2022	05/23/22	06/01/2022	06/09/2022	06/09/2022

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**U.S. NUCLEAR REGULATORY COMMISSION
REGION I**

Docket: 99990007

License: OH-03219150001

Report: 2022-001

Licensee: K2 Environmental, LLC

Locations Inspected: N/A – Remote Review of Temporary Job Sites in NRC Jurisdiction

Inspection Dates: March 11 through April 4, 2022, with in-office review through May 10, 2022

Inspector: Jason vonEhr, Health Physicist
Commercial, Industrial, R&D and Academic Branch
Division of Radiological Safety and Security

Approved By: Christopher G. Cahill, Chief
Commercial, Industrial, R&D and Academic Branch
Division of Radiological Safety and Security

Attachments: Supplemental Inspection Information

EXECUTIVE SUMMARY

K2 Environmental, LLC NRC Inspection Report 999-90007/2022-001

Program Overview

K2 Environmental, LLC, possessed a State of Ohio radioactive materials licenses to perform various radioactive material and health physics services to clients in the State of Ohio, including the shipment of radioactive material and survey/characterization of structures, materials, soils, and soil-like materials. (Section 1)

Inspection Findings

An apparent violation was identified through an inspection of another NRC licensee with operations in West Virginia related to the activities performed by K2 Environmental, LLC, and its performance of these activities within NRC jurisdiction. Specifically, K2 Environmental, LLC performed waste characterization, waste processing, and waste brokerage services related to NRC-licensed byproduct material used in oil and gas unsealed tracer operations within West Virginia in three instances in each 2018 and 2021. K2 Environmental, LLC did not have a specific license with the NRC to perform these activities, nor did it apply for or receive a general license to perform these activities through reciprocity under the provisions of Title 10 of the *Code of Federal Regulations* (10 CFR) 150.20 "Recognition of Agreement State Licenses." (Section 2)

Corrective Actions

Following the remote inspection and the preliminary exit, the licensee provided its corrective actions both orally during the preliminary exit as well as in writing through a letter dated April 4, 2022 (NRC's Agencywide Document Access and Management System (ADAMS) Accession Number ML22094A119). These actions included positive identification of the regulatory authority based on the location of work and the type of radioactive materials involved, and where doubt exists, to have a questioning attitude and seek guidance from the regulatory authority. (Section 4)

REPORT DETAILS

1. Program Overview (Inspection Procedure 87126)

K2 Environmental, LLC, possessed a State of Ohio radioactive materials licenses to perform various radioactive material and health physics services to clients in the State of Ohio, including the shipment of radioactive material and survey/characterization of structures, materials, soils, and soil-like materials.

Specifically, K2 Environmental, LLC, characterized the byproduct material within oil and gas production wastes following the use of unsealed byproduct material through tracer studies performed under the provisions of 10 CFR Part 39 "Licenses and Radiation Safety Requirements for Well Logging" by a third-party U.S. Nuclear Regulatory Commission (NRC) licensee. In addition, K2 Environmental, LLC also performed waste processing (solidification) and waste brokerage services on behalf of the waste generator (both the well owner and the third-party NRC licensee).

2. Observations and Findings

2.1. Inspection Scope

The inspection was an examination of activities conducted within the jurisdiction of the NRC, as they related to NRC-licensed byproduct material. Within this area, the inspection consisted of a selected examination of representative records and interviews with personnel.

2.2. Observations and Findings

The NRC performed an inspection on March 8, 2022, of a third-party NRC licensee, with operations in West Virginia. The third-party NRC licensee contracted through its client well-owner for K2 Environmental, LLC to: (1) characterize oil and gas production waste generated after unsealed byproduct material tracer studies performed under the provisions of 10 CFR 39 to determine the byproduct material activity concentration of the production wastes; (2) process the waste, specifically to solidify any standing water to meet other federal requirements related to the disposal of these oilfield wastes; and (3) act as a waste broker to facilitate the ultimate disposal of these wastes.

These activities were authorized by K2 Environmental, LLC's State of Ohio license (OH-03219150001, Amendment No. 1, dated September 21, 2018, expiration date May 1, 2023). These activities are considered activities that requires either: (1) a specific license, or (2) reciprocal recognition of an equivalent Agreement State license under the provisions of 10 CFR 150.20, in order to perform these activities within NRC jurisdiction.

During interviews, the owner and President of K2 Environmental, LLC, stated that he reached out to and communicated in good faith with the State of West Virginia and believed he had obtained the appropriate permits and authorizations to perform these activities. Specifically, the State of West Virginia granted: (1) a Solid and Chemical Radiochemistry Lab certification for Gamma Radioassay; (2) a Vendor Registration; and (3) a permit following registration describing radiological surveys, spectroscopy, waste brokering, spill response, environmental remediation, and waste solidification. However, these communications did not include referral to the NRC for reciprocity or an application

for a specific NRC license, as West Virginia is a Non-Agreement State and an area of exclusive federal jurisdiction.

In recent years, K2 Environmental, LLC has applied for and received reciprocity from at least three Agreement States (Pennsylvania, Colorado, and New Mexico).

K2 Environmental, LLC performed the licensed activities of concern in NRC jurisdiction on July 20, 25, and August 18, 2018, February 10, 28, and March 2, 2021, in or about the area of Triadelphia, West Virginia.

2.3. Description of Licensed Activities

As provided above in Section 2.2, K2 Environmental, LLC performed: (1) waste characterization; (2) waste processing; and (3) waste brokerage services within NRC jurisdiction on occasion in 2018 and 2021.

Regarding the waste characterization: K2 Environmental, LLC performed gamma spectroscopy using a mobile high-purity germanium detector on the external walls of large steel containers (vernacular: "VAC Boxes") containing oilfield production wastes. K2 Environmental, LLC modeled the wastes, identified the isotopes, and reverse-calculated the activity concentration (reported in picocuries/gram) for use by the third-party NRC licensee.

Regarding waste processing: K2 Environmental, LLC manipulated the production wastes within the VAC Box by adding a solidification compound on an as-needed basis. This compound caused any remaining liquids to solidify within the VAC Box (primarily water with a minority component of other liquids from the geologic formation). This step was necessary to meet other federal requirements for the disposal entity to accept the waste for ultimate disposal and was not directly related to the presence or absence of radioactive material. In the case of the third-party NRC licensee, the radioactive material itself was insoluble (i.e., not dissolved within the liquid) and therefore not directly affected by the solidification.

Regarding waste brokerage: K2 Environmental, LLC facilitated the ultimate disposal of the production waste, including the radioactive material, by completing the associated paperwork and ultimately signing off on and taking responsibility for the ultimate disposal of the waste as a service to the well owner (and through the well owner, the radioactive waste generator: the third-party NRC licensee).

2.4. Apparent Violation

In consideration of all the above, an apparent violation (999-90007/2022-001-01) was identified. The apparent violation is described below:

10 CFR 30.3 requires, in part, that no person shall manufacture, produce, transfer, receive, acquire, own, possess, or use byproduct material except as authorized in a specific license issued in accordance with the regulations in Chapter I.

10 CFR 150.20(a)(1) states, in part, that any person who holds a specific license from an Agreement State is granted a general license to conduct the same activity in non-Agreement States subject to the provisions of 10 CFR 150.20(b).

10 CFR 150.20(b) requires, in part, that any person engaging in activities in non-Agreement States, at least 3 days before engaging in each activity for the first time in a calendar year, file a submittal containing an NRC Form 241 "Report of Proposed Activities in Non-Agreement States," a copy of its Agreement State specific license, and the appropriate fee with the Regional Administrator of the appropriate U.S. Nuclear Regulatory Commission Regional Office.

Contrary to the above, on July 20, 25, and August 18, 2018, February 10, 28, and March 2, 2021, K2 Environmental, LLC, an Agreement State licensee, engaged in licensed activities in a non-Agreement State without meeting the requirements in 10 CFR 150.20(b)(1). Specifically, K2 Environmental LLC, engaged in: (1) waste characterization; (2) waste processing; and (3) waste brokerage activities related to NRC-licensed byproduct material in or about Triadelphia, West Virginia, an area of exclusive federal jurisdiction, without either: (1) first submitting an NRC Form 241, a copy of its Agreement State license, and the appropriate fee to the Regional Office; or (2) applying for and receiving a specific license from the NRC under the provisions of 10 CFR Part 30.

2.5. Conclusions

The NRC inspection identified one apparent violation concerning the failure to obtain a license, either specific or general, with the NRC to perform certain services within the State of West Virginia, a Non-Agreement State and area of exclusive federal jurisdiction.

3. **Corrective Actions**

Following the remote inspection and the preliminary exit, the licensee provided its corrective actions both orally during the preliminary exit as well as in writing through a letter dated April 4, 2022 (NRC's Agencywide Document Access and Management System (ADAMS) Accession Number ML22094A119).

These actions included:

1. During the initial planning phase of work involving regulated radioactive material, K2 [Environmental, LLC] will identify the state or states where work will occur. K2 will apply for and be granted reciprocity from the applicable state regulatory body or the NRC prior to commencing work.
2. K2 [Environmental, LLC] will strictly adhere to the terms and conditions of the reciprocity agreement.
3. K2 [Environmental, LLC] operates in a niche' market where regulatory primacy and regulated work scope are not always easily defined. K2 will maintain a questioning attitude and seek written regulatory guidance from state and/or NRC authorities when doubt exists whether a specific work activity is regulated and if so, by whom.

4. Exit Meeting Summary

The NRC inspector presented preliminary inspection findings following the conclusion of the initial technical review on March 25, 2022. Following this, the NRC conducted a final exit briefing via teleconference with the K2 Environmental, LLC owner and President on May 11, 2022. The licensee acknowledged the findings presented and did not dispute any of the facts presented.

SUPPLEMENTAL INSPECTION INFORMATION

LIST OF PERSONS CONTACTED

Kevin Kosko, President and Owner, K2 Environmental, LLC

INSPECTION PROCEDURES USED

87126 – Industrial/Academic/Research Programs

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

999-90007/2022-001-01 AV Failure to either apply for and receive an NRC specific license (10 CFR 30.3) or apply for and receive approval for reciprocity (10 CFR 150.20(b))

Closed

None

Discussed

None

LIST OF ACRONYMS AND ABBREVIATIONS USED

ADAMS	Agencywide Documents Access and Management System
AV	Apparent Violation
CFR	<i>Code of Federal Regulations</i>
NRC	Nuclear Regulatory Commission
PEC	Predecisional Enforcement Conference
R&D	Research and Development