pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

NORTHEAST REGIONAL OFFICE
CLEAN WATER PROGRAM

NPDES PERMIT FACT SHEET ADDENDUM

Application Type	**New**	Application No.	**PA0275883**
Facility Type	**Industrial**	APS ID	**914907**
Major / Minor	**Minor**	Authorization ID	**1136932**

Applicant and Facility Information

Applicant Name	**Fluid Recovery Services LLC**	Facility Name	**FRS - Kingsley Facility**
Applicant Address	P.O. Box 232, 5035 Route 110	Facility Address	5124 State Route 92
	Creekside, PA 15732		Kingsley, PA 18826
Applicant Contact	Devesh Mittal	Facility Contact	James Donovan
Applicant Phone	-	Facility Phone	(724) 746-5300 x227
Client ID	300424	Site ID	812112
SIC Code	1389	Municipality	Lenox Township
SIC Description	Mining - Oil and Gas Field Services, NEC	County	Susquehanna
Date Published in PA Bulletin	July 22, 2017 (1st draft)	EPA Waived?	Yes
Comment Period End Date	September 5, 2017 (1st draft + 15 day extension)	If No, Reason	-

Purpose of Application: New NPDES permit for discharge of treated industrial wastewater.

Internal Review and Recommendations

Public notice was published in the PA Bulletin on July 22, 2017. Comments were received from FRS in a letter dated September 5, 2017. The comments and the Department's responses are below. Due to some of the changes made, a second draft permit will be issued.

FRS Comment 1: Part 437 ELG Subcategories. The Department has determined that the most stringent provisions of Subparts A, B, and C of 40 CFR Part 437 are all applicable to the FRS discharge at the Kingsley facility. As stated in the fact sheet, the Department believes that because the wastewater that will be treated at the Kingsley facility "exhibits the characteristics of Subparts A, B, and C," all three Part 437 Subparts apply. We do not agree. Whether a subpart applies depends on, among other things, whether the facility treats Subpart A "metal bearing wastes," Subpart B "oily wastes," or Subpart C "organic wastes." Each of these terms is defined by the manufacturing or processing operation that generates the wastewater, not the characteristics of the wastewater.

Putting aside whether it was appropriate, the Department's conclusion that the wastewater that will be treated by FRS exhibits characteristics of all three subparts in 40 CFR Part 437 is not supported by the data submitted with the permit application. FRS will not accept metal bearing wastewaters or organic wastewaters, as those terms are defined in 40 CFR section 437.2. We would accept only oily wastewaters from our generator customers. FRS believes that if any Federal subpart applies to the Kingsley Facility discharge, it should be Subpart B "oily wastes." Other facilities that treat similar wastewaters utilizing comparable treatment process have had only one subpart applied to their discharges in NPDES issued by the Department. Thus, FRS requests that the Department revise the draft permit to impose effluent limits consistent with only Subpart B and delete all other effluent limits that are imposed because of Subparts A and C of 40 CFR Part 437.

The Department also cites 25 Pa. Code section 95.10(b)(3) as justification to impose effluent limitations from 40 CFR section 437.45(b), which are the new source performance standards under Subpart D. Other new facilities with treated discharges of wastewater resulting from oil and gas production have not been required to meet the full suite of effluent limits in 40 CFR 437.45(b). Even assuming it was appropriate for the Department to rely upon section 95.10(b)(3), the Department

Approve	Return	Deny	Signatures	Date
X			Brian Burden Brian Burden, E.I.T. / Project Manager	August 10, 2020
X			Amy M. Bellanca, P.E. / Environmental Engineer Manager	August 10, 2020

Internal Review and Recommendations

misapplied section 95.10(b)(3). Section 95.10(b)(3) provides that subject discharges must comply with 40 CFR section 437.45(b). It does not provide that the Department may choose among the most stringent effluent limitations in the various 40 CFR Part 437 Subparts. Furthermore, 40 CFR section 437.45(b) allows for less stringent oil and grease limits and does not require instantaneous maximum limits, contrary to what the Department included in the draft NPDES permit for the Kingsley facility. FRS requests that the Department revise the permit to remove the effluent limitations imposed because of its misapplication of section 95.10(b)(3) or, in the alternative, revise the permit to require only the effluent limitations in Subpart D.

Response: The provisions under 40 CFR 437 Subpart A (Metals Treatment and Recovery), Subpart B (Oils Treatment and Recovery) and Subpart C (Organics Treatment and Recovery) are removed from the permit.

Limitations resulting from the application of PA Code 95.10(b)(3) will remain in the permit. Compliance with PA Code 95.10(b)(3) is required for "new and expanding treated discharges of wastewater resulting from fracturing, production, field exploration, drilling or well completion of natural gas wells", which accurately describes the proposed facility. PA Code 95.10(b)(3) requires compliance with the NSPS in 40 CFR 437.45(b), which is Subpart D of the Centralized Waste Treatment Point Source Category (Multiple Wastestreams).

FRS Comment 2: Sampling Frequencies for pH and Oil and Grease. The Department proposes to require daily sampling for both the pH and oil and grease parameters. Daily sampling for these parameters is excessive and unreasonable. Other facilities that treat similar wastewaters utilizing comparable treatment process have been required to monitor for oil and grease once per week. In addition, FRS does not receive wastewater bearing oil at the Kingsley Site as the water is produced from natural gas wells, and maintains a very stable pH with its distillate. FRS believes that the data submitted with its permit application supports the conclusion that monitoring once per week for these parameters would be sufficient to reasonably characterize the nature of the discharge from the Kingsley facility. FRS requests that the Department change to the sampling frequencies for pH and oil and grease to once per week.

Response: The sampling frequencies are adjusted to 1/week for pH and Oil & Grease.

FRS Comment 3: Benzene, Toluene, Ethylbenzene, Xylenes, and BTEX. The Department proposes to require FRS Kingsley to meet benzene and BTEX effluent limits and to require weekly sampling for benzene, toluene, ethylbenzene, xylene, and BTEX. Other facilities that treat similar wastewaters utilizing a comparable treatment process, however, have not been required to meet benzene and BTEX effluent limits or conduct weekly monitoring for benzene, toluene, ethylbenzene, xylene, and BTEX. Therefore, FRS requests that the Department revise the draft permit to remove the effluent limits for benzene and BTEX and the monitoring requirements for benzene, toluene, ethylbenzene, xylene, and BTEX.

Putting aside whether it was appropriate for the Department to rely upon PAG-05 to impose any effluent limitations and monitoring requirements for these parameters, the Department states in the fact sheet that it used PAG-05 General Permit for Discharges from Petroleum Product Contaminated Groundwater Remediation Systems to arrive at the limitations, and presumably the monitoring frequencies, for these parameters. PAG-05, however, recommends monthly, not weekly sampling, for these parameters. Consequently, at the very least, the Department should revise the draft permit to remove the effluent limits for benzene and BTEX reduce the sampling frequency for these parameters to monthly in accordance with PAG-05.

Response: To clarify the wording in the original fact sheet, dated July 6, 2017, the Department didn't impose effluent limitations based on the PAG-05 General Permit for Discharges from Petroleum Product Contaminated Groundwater Remediation Systems. Best Professional Judgement (BPJ) suggested that technology available to meet the requirements of the PAG-05 general permit to remove BTEX from a contaminated groundwater waste stream would be available to a facility dedicated to the treatment of wastewater containing BTEX compounds.

The monitoring frequency for BTEX compounds is adjusted to 1/month. At this time, it's agreed that monthly sampling will be representative of the discharge. The limitations in the original draft permit will come into effect 3 years from the effective date of the permit. Monthly monitoring/reporting is required for the first 3 years of permit coverage. Based on sampling results generated during the upcoming permit cycle, the monitoring frequencies can be revisited during the next permit renewal.

FRS Comment 4: Gross Alpha, Radium 226/228, and Uranium Effluent Limitations. The Department proposes to require FRS Kingsley to meet effluent limits for these parameters and conduct weekly sampling. The Department states that these

Internal Review and Recommendations

limitations are based on these parameters being identified as pollutants of concern for shale gas extraction wastewaters. Other facilities that treat similar wastewaters utilizing comparable treatment process, however, have not been required to meet effluent limits for these parameters, nor have they been required to monitor on a weekly basis. Therefore, FRS requests that the Department revise the draft permit to remove the effluent limits and monitoring requirements for gross alpha, radium 226/228, and uranium.

Even if it were somehow appropriate for the Department to impose effluent limits and monitoring requirements for these parameters, FRS believes that weekly monitoring of gross alpha, radium 226/228, and uranium is excessive and unreasonable. FRS is confident that after processing the water through the pretreatment section followed by the distillation process, the concentrations of these constituents will be below the limits presented in the draft permit. To substantiate this, FRS will send the distillate results to the department shortly. Therefore, FRS maintains that gross alpha, radium 226/228, and uranium should be required monthly if at all.

Response: The monitoring frequency for these pollutants is adjusted to 1/month. At this time, it's agreed that monthly sampling will be representative of the discharge. Based on sampling results generated during the upcoming permit cycle, the monitoring frequencies can be revisited during the next permit renewal. Although FRS is confident that the concentrations of these constituents will be below the limits presented in the draft permit, the Department feels it's appropriate to impose limitations for these parameters to ensure they are consistently met.

FRS Comment 5: Nitrogen and Phosphorus Effluent Limits. The Department has decided to apply zero pounds per year effluent limitations for Total Nitrogen and Total Phosphorus "[b]ased on the anticipated wastewater characteristics and flows described in the permit application and its supporting documents and/or amendments" and based on Chesapeake Bay requirements in Part C. of the draft permit. The samples accompanying the permit application for the Kingsley facility, however, did not include any results showing Total Phosphorus or any nitrates or nitrites in the wastewaters. Consequently, FRS does not believe the Department has adequate justification for the 0 lbs/year limits for Total Nitrogen and Total Phosphorus.

Even if Total Nitrogen and Total Phosphorus limits were somehow justified based on the information in FRS's permit application for the Kingsley facility, the Department's proposed 0 lbs/year limits are inconsistent with the Department's Phase 2 Watershed Implementation Plain Wastewater Supplement (Oct. 14, 2016) (WIP Supplement) and are not authorized under applicable regulations. Per the WIP Supplement, "the permit writer must document in the fact sheet that adequate available Capacity for [Total Nitrogen] and [Total Phosphorus] remains to authorize" a permit for a new non-significant industrial waste water facility, such as the Kingsley facility. The Department's draft permit and fact sheet fail to explain why there is no adequate capacity for any insignificant Total Nitrogen or Total Phosphorus loads that would be discharged by FRS Kingsley. In addition, 25 Pa. Code section 96.4(d) provides that TMDL waste load allocations, such as those that appear to be driving the Total Nitrogen and Total Phosphorus limits in the Kingsley facility's draft permit, are to serve as the basis for water quality-based effluent limits (WQBELs) for point sources under 25 Pa. Code chapter 92. The applicable provisions of chapter 92, however, require WQBELs when the discharge will cause, have the reasonable potential to cause, or contribute to a water quality standard. The Department's draft permit and fact sheet fail to explain why anything above 0 lbs/year of Total Nitrogen and Total Phosphorus discharged from FRS Kingsley's facility would run afoul of the waste load allocation for non-significant industrial waste water facilities in Pennsylvania's allocations under the Chesapeake Bay TMDL.

FRS requests that the Total Nitrogen and Total Phosphorus limits in the draft permit be deleted.

Response: The required monitoring frequencies for these parameters have been updated to 1/month.

As per the Department's Phase 2 Watershed Implementation Plan Wastewater Supplement: "In general, for new non-significant IW discharges (including existing facilities discharging without a permit), DEP will issue permits containing Cap Loads of "0" and these facilities will be expected to purchase credits and/or apply offsets to achieve compliance."

In response to the statement that "the samples accompanying the permit application for the Kingsley facility, however, did not include any results showing Total Phosphorus or any nitrates or nitrites in the wastewaters.", please note that Total Nitrogen (TN) consists of both Total Kjeldahl Nitrogen (TKN) and Nitrate+Nitrite-N. Intake sampling results submitted with the permit application show a TKN concentration of 374 mg/L and an Outfall 001 concentration of 41.5 mg/L, thus showing the presence of TN in the wastewaters. With regards to Total Phosphorus, the permit application did not show significant quantities of this nutrient for both intake and outfall sampling. If sampling results for any parameter are below the Department's target quantitation limits (QLs), they are not considered present in the wastewaters. The most recent version

Internal Review and Recommendations

of the Department's *NPDES Application for Individual Permit to Discharge Industrial Wastewater Instructions* document (form no. 3800-PM-BCW0008a, rev. 1/2019) lists the target QL for Total Phosphorus as 0.01 mg/L. If FRS receives "non-detect" results using the most current target QL, then both the concentration and mass loading for that sampling period is considered to be 0. Footnote (3) is added to Part A.I.B.2 of the permit to remind the permittee of this provision.

FRS Comment 6: Reporting Requirements for Hauled-In Waste. In discussions with FRS about NPDES permits for its other facilities, the Department has stated that the reporting requirements for hauled-in residual waste in Part B, Section III.C.3(a)(i) on page 21 are a standard condition and that it is not in the position to change the language. The language in this section purports to hold FRS liable to ensure that its generator customers properly complete Bureau of Waste Management Form 26R records and deliver them to us. While we can provide forms and information from DEP to our customers, we cannot be responsible, or held liable under the NPDES permit, if a generator does not complete a Form 26R accurately or completely. We cannot be put into the enforcer position and track the customer's waste stream to determine when that waste stream reaches the 26R reporting status and thus requires a chemical analysis. Therefore, even though we currently plan to receive wastewater only from a combination of conventional and unconventional producers, upon the issuance, as a final permit, of the current NPDES draft, FRS risks being found in noncompliance if a customer does not provide the appropriate information and forms. It is the Department's responsibility to directly enforce Form 26R compliance and the NPDES permit should not put FRS in the position to enforce environmental requirements on other parties, at the risk of violating our own permit.

FRS has provided an example attached with this letter of the current manifest form that is completed each time a load is brought to its various Facilities. FRS requests that a copy of all the completed manifests for the preceding month be an approved record in place of the "Hauled In Residual Wastes" Supplemental Report (3800-FM-BPNPSM0450) the Department proposes to require as an attachment to the monthly DMRs.

Response: No changes are made to the permit requirements. See individual detailed responses below:

FRS: "While we can provide forms and information from DEP to our customers, we cannot be responsible, or held liable under the NPDES permit, if a generator does not complete a Form 26R accurately or completely."

Response: FRS would not be held liable if a generator does not complete a Form 26R accurately or completely. The generator would be held liable.

FRS: "It is the Department's responsibility to directly enforce Form 26R compliance and the NPDES permit should not put FRS in the position to enforce environmental requirements on other parties, at the risk of violating our own permit."

Response: It is agreed that it is the Department's responsibility to enforce Form 26R compliance. It will be FRS's responsibility to ask each generator if a chemical analysis was performed on the wastewater via the "Yes/No" column on form 3800-FM-BPNPSM0450. If the generator indicates that an analysis was performed, then FRS is required to obtain a copy of the analysis forms.

FRS: "FRS requests that a copy of all the completed manifests for the preceding month be an approved record in place of the "Hauled In Residual Wastes" Supplemental Report (3800-FM-BPNPSM0450) the Department proposes to require as an attachment to the monthly DMRs."

Response: The Department requires completion of form 3800-FM-BPNPSM0450. FRS may supplement that form with any other form of their choosing.

FRS Comment 7: Section V. Section V.C.2. should specify that the Minimum Required BMPs apply as a permit requirement only as applicable and appropriate to FRS's activities. FRS requests that the text be revised to state, "The following site specific BMPs apply if applicable and appropriate to activities at the facility:".

Response: The permit language has been updated as requested.

FRS Comment 8: The Total Nitrogen and Total Phosphorus Limits in the draft NPDES Permit are "Cap Loads". On page 3 of the fact sheet, the Department states that "FRS will not be assigned cap loads for Total Nitrogen and Total Phosphorus" and that "[a]fter nutrient credit purchases, the net annual mass loadings for Total Nitrogen and Total Phosphorus shall be 0 lbs/year." In addition to the flaws noted above, the Department's characterization of the Total Nitrogen and Total Phosphorus

Internal Review and Recommendations

limits as something other than “cap loads” in the fact sheet is inaccurate and apparently designed to deprive FRS of the ability to use offsets to satisfy any Total Nitrogen and Total Phosphorus effluent limits. A “cap load” is “the mass load of a pollutant authorized by an NPDES permit” and cap loads are “implemented in NPDES permits by the establishment of Annual Net Mass Load Limits.” *See* Draft NPDES permit, Part C.I.B. Given that the 0 lbs/year Total Nitrogen and Total Phosphorus limits are expressed as “net annual mass loadings,” the Department should characterize these limits as “cap loads” in the fact sheet. Indeed, this is what it calls these limits in Part C.I.A. of the draft permit.

By mischaracterizing the Total Nitrogen and Total Phosphorus limits as something other than “cap loads” and stating that FRS “will be required to purchase nutrient credits to meet Chesapeake Bay requirements,” the Department has converted what would otherwise be an optional means of complying with an NPDES permit limit for nitrogen and phosphorus – the purchase of credits – into a mandatory requirement. This is contrary to 25 Pa. Code § 96.8(b)(3), which provides that “credits and offsets may be used by permittees effluent limits” for nitrogen and phosphorus.” Assuming these limits were appropriate in the first place (they are not – please see above), properly characterizing these limits as “cap loads” would enable FRS to use offsets, if necessary, to meet these limits and not be forced to purchase nutrient credits as the sole means of compliance. Therefore, to the extent that the Total Nitrogen and Total Phosphorus limits remain in the final NPDES permit for the Kingsley facility, the fact sheet should be corrected to state that these limits are “cap loads.”

Response: The discrepancy in the fact sheet is noted in this addendum. The original intent of the fact sheet wording was to state that FRS would be assigned a cap load of “0”.

With regards to the appropriateness of the limits, please see the FRS Comment 5 response.

FRS Comment 9: Allegedly Open Violations for FRS in the Northwestern Region. Page 4 of the fact sheet refers to allegedly open violations at the Franklin facility that must be resolved before the Kingsley permit is issued. We are not aware of any violations at Franklin. The facility is operating and has been operating in compliance with its NPDES permit. The U.S Fish and Wildlife Service submitted comments to the Department’s Northwestern Regional Office relating to the pending permit application, but these comments pertain to mussels in the Allegheny River and effluent limits to be considered for the renewed permit. They do not relate to violations of the existing permit. We are not aware of any Department authority to withhold issuance of the Kingsley permit pending resolution of permitting questions at Franklin.

Response: Please refer to the First Modification to the Consent Order and Agreement (signed December 14, 2018) by and between the Commonwealth of Pennsylvania, Department of Environmental Protection, and Fluid Recovery Services, LLC.