



October 7, 2022

ATTN: JMIA-OSR (JENNIFER BUSARD)
IOWA ARMY AMMUNITION PLANT
17571 DMC HIGHWAY 79
MIDDLETOWN IA 52638-5000

RE: State ARARs for the OU-4 Groundwater Feasibility Study, Iowa Army Ammunition Plant,
Middletown, IA

Dear Ms. Busard:

This letter is in response to the request from Iowa Army Ammunition Plant dated September 8, 2022 to the Iowa Department of Natural Resources (IDNR) Contaminated Sites Section regarding an upcoming feasibility study for OU-4. The attached are potential IDNR applicable or relevant and appropriate standards (ARARs) for the possible actions proposed in the September 8, 2022 request. Please note, Table 1 follows the definition for Action Level in 567 IAC 133, using lifetime health advisory levels (HAL), maximum contaminant levels (MCL), and the department's statewide standards (SWS).

All listed regulations can be accessed from the following Internet address:

<http://www.legis.iowa.gov/law/administrativeRules/chapters?pubDate=01-23-2013&agency=567>

Please contact me at 515-669-5494 if you need additional information regarding these ARARs.

Sincerely,

Shelly Nellesen
Environmental Specialist Senior
Solid Waste & Contaminated Sites Section
Iowa Department of Natural Resources
Shelly.Nellesen@dnr.iowa.gov
(515) 669-5494

Encl: Table 1, Table 2, and Table 3 - State ARARs

c: Wesley March, U.S. EPA, 11201 Renner Boulevard, Lenexa, Kansas 66219 via e-mail
Mike Sullivan, Iowa DNR Solid Waste & Contaminated Sites Supervisor

TABLE 1 Contaminant Specific State ARARs

Chemical	Maximum Concentration Allowed	Medium	Reason Why Requirement is an ARAR	Citation
1,2-Dichloroethane	0.005 mg/L (MCL)	Groundwater	The goal of groundwater cleanup is use of best available technology and best management practices as long as it is reasonable and practical to remove all contaminants, and in any event until water contamination remains below the action level for any contaminant, and the department determines that the contamination is not likely to increase and no longer presents a significant risk. Where site conditions and available technology are such that attainment of these goals would be impractical, the department may establish an alternative cleanup level or levels, including such other conditions as will adequately protect the public health, safety, environment, and quality of life.	567 IAC 133.4(3)"b"1
2,4-Dichlorophenol	0.02 mg/L (HAL)	Groundwater	The goal of groundwater cleanup is use of best available technology and best management practices as long as it is reasonable and practical to remove all contaminants, and in any event until water contamination remains below the action level for any contaminant, and the department determines that the contamination is not likely to increase and no longer presents a significant risk. Where site conditions and available technology are such that attainment of these goals would be impractical, the department may establish an alternative cleanup level or levels, including such other conditions as will adequately protect the public health, safety, environment, and quality of life.	567 IAC 133.4(3)"b"1
Benzene	0.003 mg/L (HAL)	Groundwater	The goal of groundwater cleanup is use of best available technology and best management practices as long as it is reasonable and practical to remove all contaminants, and in any event until water contamination remains below the action level for any contaminant, and the department determines that the contamination is not likely to increase and no longer presents a significant risk. Where site conditions and available technology are such that attainment of these goals would be impractical, the department may establish an alternative cleanup level or levels, including such other conditions as will adequately protect the public health, safety, environment, and quality of life.	567 IAC 133.4(3)"b"1
Manganese	0.03 mg/L (HAL)	Groundwater	The goal of groundwater cleanup is use of best available technology and best management practices as long as it is reasonable and practical to remove all contaminants, and in any event until water contamination remains below the action level for any contaminant, and the department determines that the contamination is not likely to increase and no longer presents a significant risk. Where site conditions and available technology are such that attainment of these goals would be impractical, the department may establish an alternative cleanup level or levels, including such other conditions as will adequately protect the public health, safety, environment, and quality of life.	567 IAC 133.4(3)"b"1

Naphthalene	0.1 mg/L (HAL)	Groundwater	The goal of groundwater cleanup is use of best available technology and best management practices as long as it is reasonable and practical to remove all contaminants, and in any event until water contamination remains below the action level for any contaminant, and the department determines that the contamination is not likely to increase and no longer presents a significant risk. Where site conditions and available technology are such that attainment of these goals would be impractical, the department may establish an alternative cleanup level or levels, including such other conditions as will adequately protect the public health, safety, environment, and quality of life.	567 IAC 133.4(3)"b"1
Pentachlorophenol	0.04 mg/L (HAL)	Groundwater	The goal of groundwater cleanup is use of best available technology and best management practices as long as it is reasonable and practical to remove all contaminants, and in any event until water contamination remains below the action level for any contaminant, and the department determines that the contamination is not likely to increase and no longer presents a significant risk. Where site conditions and available technology are such that attainment of these goals would be impractical, the department may establish an alternative cleanup level or levels, including such other conditions as will adequately protect the public health, safety, environment, and quality of life.	567 IAC 133.4(3)"b"1
2,3,7,8-TCDD	3.0 x10 ⁻⁸ mg/L (MCL)	Groundwater	The goal of groundwater cleanup is use of best available technology and best management practices as long as it is reasonable and practical to remove all contaminants, and in any event until water contamination remains below the action level for any contaminant, and the department determines that the contamination is not likely to increase and no longer presents a significant risk. Where site conditions and available technology are such that attainment of these goals would be impractical, the department may establish an alternative cleanup level or levels, including such other conditions as will adequately protect the public health, safety, environment, and quality of life.	567 IAC 133.4(3)"b"1
Trichloroethylene	0.005 mg/L (MCL)	Groundwater	The goal of groundwater cleanup is use of best available technology and best management practices as long as it is reasonable and practical to remove all contaminants, and in any event until water contamination remains below the action level for any contaminant, and the department determines that the contamination is not likely to increase and no longer presents a significant risk. Where site conditions and available technology are such that attainment of these goals would be impractical, the department may establish an alternative cleanup level or levels, including such other conditions as will adequately protect the public health, safety, environment, and quality of life.	567 IAC 133.4(3)"b"1

Vinyl Chloride	0.002 mg/L (MCL)	Groundwater	The goal of groundwater cleanup is use of best available technology and best management practices as long as it is reasonable and practical to remove all contaminants, and in any event until water contamination remains below the action level for any contaminant, and the department determines that the contamination is not likely to increase and no longer presents a significant risk. Where site conditions and available technology are such that attainment of these goals would be impractical, the department may establish an alternative cleanup level or levels, including such other conditions as will adequately protect the public health, safety, environment, and quality of life.	567 IAC 133.4(3)"b"1
2,4-Dinitrotoluene	0.00025 mg/L (SWS) PGWS 0.005 mg/L (SWS) NPGWS	Groundwater	The goal of groundwater cleanup is use of best available technology and best management practices as long as it is reasonable and practical to remove all contaminants, and in any event until water contamination remains below the action level for any contaminant, and the department determines that the contamination is not likely to increase and no longer presents a significant risk. Where site conditions and available technology are such that attainment of these goals would be impractical, the department may establish an alternative cleanup level or levels, including such other conditions as will adequately protect the public health, safety, environment, and quality of life.	567 IAC 133.4(3)"b"1
2,6-Dinitrotoluene	0.00026 mg/L (SWS) PGWS 0.0051 mg/L (SWS) NPGWS	Groundwater	The goal of groundwater cleanup is use of best available technology and best management practices as long as it is reasonable and practical to remove all contaminants, and in any event until water contamination remains below the action level for any contaminant, and the department determines that the contamination is not likely to increase and no longer presents a significant risk. Where site conditions and available technology are such that attainment of these goals would be impractical, the department may establish an alternative cleanup level or levels, including such other conditions as will adequately protect the public health, safety, environment, and quality of life.	567 IAC 133.4(3)"b"1
Nitrobenzene	0.014 mg/L (SWS) PGWS 0.07 mg/L (SWS) NPGWS	Groundwater	The goal of groundwater cleanup is use of best available technology and best management practices as long as it is reasonable and practical to remove all contaminants, and in any event until water contamination remains below the action level for any contaminant, and the department determines that the contamination is not likely to increase and no longer presents a significant risk. Where site conditions and available technology are such that attainment of these goals would be impractical, the department may establish an alternative cleanup level or levels, including such other conditions as will adequately protect the public health, safety, environment, and quality of life.	567 IAC 133.4(3)"b"1

Table 2 Location Specific Requirements

Location Subject to Requirement	Requirement	Reason Why Requirement is an ARAR	Regulator Citation
Protected water sources	Restricts water withdrawals within specified areas	Ensure non-exposure to defined areas of groundwater contamination	567 IAC 53

Table 3 Action Specific Requirements

Action Subject to Requirement	Requirement	Reason Why Requirement is an ARAR	Regulator Citation
Private well construction permits	Permits are not required for monitoring wells that are required as part of a department-approved project	Promulgated rule	567 IAC 38
Non-Public well construction standards	Establishes construction standards for any monitoring wells constructed for removal activities	Promulgated rule	567 IAC 49
Well abandonment requirements	Establishes requirements for abandoning any wells constructed during removal activities	Promulgated rule	567 IAC 39
Laboratory certification	Required for laboratories performing analysis of samples which are required to be submitted to the Iowa DNR	Promulgated rule	567 IAC 83
Discharge treated groundwater	The discharge of any pollutant from a point source into navigable water is prohibited unless authorized by an NPDES permit	Promulgated rule	567 IAC 62
Special waste authorization	No special wastes shall be delivered to or accepted by a municipal solid waste landfill unless disposal is authorized by a special waste authorization issued by the Department of Natural Resources	Promulgated rule	567 IAC 109
Radioactive materials	Radioactive materials are prohibited from being deposited in sanitary landfills	Promulgated rule	Iowa Code 455B.315
Uniform Environmental Covenants Act	Establishes requirements for environmental covenant	Promulgated rule	Iowa Code 455I