District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

For State Use Only:

Form C-137A
June 30, 2016

Submit 1 Copy to Santa Fe Office

APPLICATION FOR MINOR MODIFICATION TO SURFACE WASTE MANAGEMENT FACILITY

1. Operator: Environmental Plus, Inc. Environmental Plus Landfarm

Address: Post Office Box 1558, Eunice, New Mexico 88231

Contact Person: Sherry K. Miller Phone: 575-390-1886

2. Location: _____/4 _____/4 Section 14 Township 22S Range 37E

3. Provide permit number NM-1-013

4. Attach a description of the proposed minor modification(s) to the surface waste management facility.

5. If the Minor Modification involves changes to a treatment, remediation, or disposal method, attach engineering designs, certified by a registered professional engineer, including technical data on the design elements of each applicable treatment, remediation, and disposal method and detailed designs of surface impoundments.

6. If the Minor Modification will affect the closure and post-closure plan, attach an updated closure and post closure plan, including a responsible third party contractor's cost estimate, sufficient to close the surface waste management facility in a manner that will protect fresh water, public health, and the environment (the closure and post closure plan shall comply with the requirements contained in 19.15.36.18 NMAC).

7. If the Minor Modification will affect the contingency plan, attach an updated contingency plan that complies with the requirements of Subsection N of 19.15.36.13 NMAC and with NMSA 1978, Sections 12-12-1 through 12-12-30, as amended (the Emergency Management Act).

8. If the Minor Modification will affect the control of run-on or run-off water at the site, attach an updated plan to control run-on water onto the site and run-off water from the site that complies with the requirements of Subsection M of 19.15.36.13 NMAC.

9. If the Minor Modification will affect the best management practice plan, attach a best management practice plan to ensure protection of fresh water, public health, and the environment.

10. The division may require additional information to demonstrate that the surface waste management facility's operation will not adversely impact fresh water, public health, or the environment and that the surface waste management facility will comply with division rules and orders.

11. CERTIFICATION
I hereby certify that the information submitted with this application is true, accurate, and complete to the best of my knowledge and belief.

Name: Sherry K. Miller Title: Owner

Signature: Sherry K. Miller Date: 9-19-2022

E-mail Address: Sherry.EPI@gmail.com or mccasland_67@msn.com

Date: September 13, 2022

Sherry K. Miller
President
Environmental Plus, Inc.
PO Box 1558
Eunice, New Mexico 88231
Permit NM-1-013 Minor Modification

Mr. Brad Jones
Environmental Specialist
New Mexico Oil Conservation Division (NMOCD)
Environmental Bureau
1220 S. St. Francis Drive
Santa Fe, NM 87505

Subject:
Submittal of NMOCD form 137A requesting a minor modification to Permit NM-1-013 and exception to 19.15.36.15.B Background testing.

Dear Mr. Brad Jones:

In response to the NMOCD letter dated June 30, 2011 pertaining to the "Rule 36 Transitional Provisions," Environmental Plus, Inc. (EPI) is submitting this NMOCD form 137A requesting the following minor modification to Permit #NM-1-013. EPI is also requesting an exception, as provided for in 19.15.36.19.B, to the 19.15.36.15.B Background testing requirements.

1. Request requirement #5 of the "Landfarm Operation" section of the existing permit, regarding the biweekly disking requirement, be modified to allow disking to cease once the monitoring data indicates the soil has attenuated to the Treatment Zone monitoring thresholds of 19.15.36.15.D.
2. Request requirement #13 of the "Landfarm Operation" section of the existing permit, regarding TPH, Benzene, and BTEX, be removed and replaced with the Treatment Zone Monitoring requirements of 19.15.36.15.D.
3. Request the references to analysis of Total Petroleum Hydrocarbon (TPH) using EPA Method 418.1 in 19.15.36.15.B, D, E, and F be replaced by EPA Method 8015M and 8015M Extended. TPH will be reported as the sum of the Gasoline, Diesel, and Motor Oil Range Organics, (i.e., GRO: C_6-C_{10}, DRO: >C_{10}-C_{28}, and MRO>C_{28}-C_{36}).
4. Request Chloride laboratory analytical method SM4500Cl-B (a titration method) be allowed in addition to EPA method 300.1.

5. Request requirement #1 of the "Treatment Zone Monitoring" section of the existing permit be removed and replaced with Rule 36.15.E requiring Vadose Zone samples be collected between three (3) and four(4) feet below the cell's original ground surface rather than two (2) to three (3) feet below the native ground surface.
6. Request paragraph 1 (quarterly Vadose Zone sampling) of the Reporting Section of the existing permit be replace with 19.15.36.15.E Semi-Annual Vadose Zone Sampling.
7. Request 19.15.36.15.E Semi-Annual Vadose Zone Sampling frequency be reduced to annually if the Treatment Zone Soils in the cell have attained closure. The rationale being that there is no potential for increased impact to the Vadose Zone.
8. Request paragraphs 1 and 3 in the Reporting Section of the existing permit be replaced with 19.15.36.15.E (4), i.e., Record keeping. The operator shall maintain a copy of the monitoring reports in a form readily accessible for division inspection.
9. Request paragraph 2 in the existing permit be replaced with 19.15.36.15.E (5) Release Response notification.
10. Request the existing permit be modified to allow sample excavations and boreholes be backfilled with the excavated native soil rather than with an impermeable material such as cement or bentonite. Emplaced soil will be scraped away to expose the native soil surface during Vadose Zone sampling and the excavation backfilled with the soil excavated to expose the sampling interval.
11. Request, consistent with the risk assessment protocols allowed by 19.15.36.F.5 and G, an exception to the references to "Background Soil Concentrations" in 19.36.15.E.2 - Vadose Zone Monitoring and in 19.36.15.F.2 - Treatment zone closure performance standards. These compliance standards will be replaced by the most stringent specific risk base concentrations developed and established by the New Mexico Environment Department (NMED) Hazardous Waste Bureau (HWB) and the Ground Water Quality Bureau titled, Risk Assessment Guidance for Site Investigations and Remediation, Volume I, Soil Screening Guidance for Human Health Risk Assessments, June 2022. The basis for this request is that the current and historical oil and gas drilling and production activities spanning 60 years, i.e., 1 plugged well within the facility, 6 production wells and 3 tank batteries (2 up gradient) adjacent to the perimeter of the facility, and 3 petroleum transmission pipelines, have an unknown legacy that could perturb the comparison of Treatment and Vadose Zone analytical closure results with expected "non-detect" background concentrations for the constituents of concern. The origin of any exceedances could not be determined with certainty. The attached annotated map of the site shows plugged well, pipelines, and the adjacent production facilities. A Background Sampling Plan will be developed and submitted for NMOCD approval to establish the site specific Rule 36 regulatory thresholds for GRO, DRO, TPH, BTEX, and Chloride and will use the EPA ProUCL 5.1 program to support the facility background statistical demonstration.

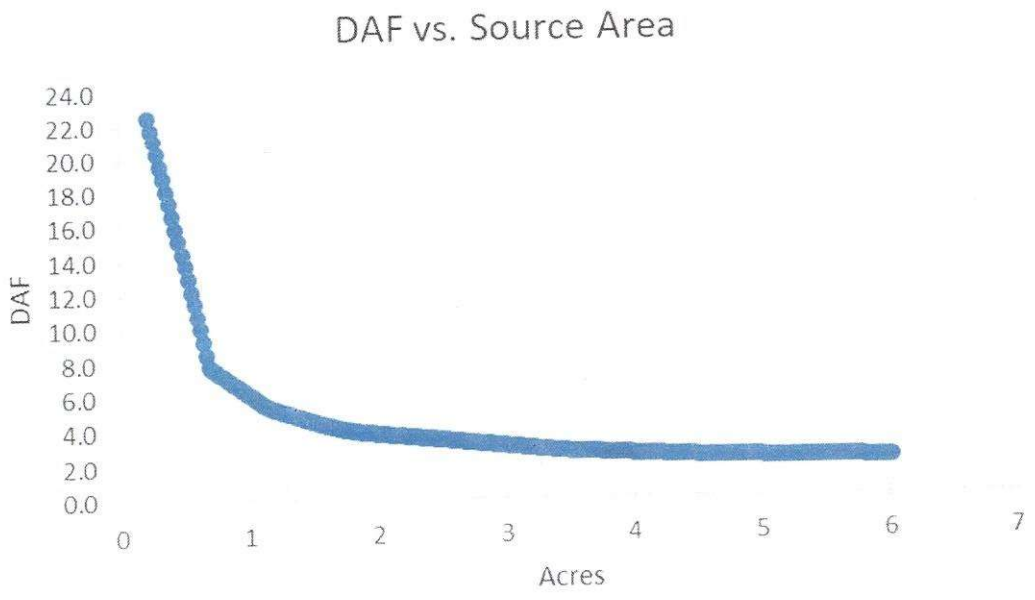
12. Request applying the NMGW/MCL based SSLs listed in Table A-3 Summary of Soil-to-Groundwater Screening Levels from the Risk Assessment Guidance for Investigations and Remediation Volume I, June 2022 for each parameter listed in Subsections A and B of 20.6.2.3103 NMAC. The most stringent SSL of the Ambient and MCL base Exposure Screening Levels will be applied. Note that this risk based approach will not apply initially to GRO, DRO, TPH, BTEX, or Chloride; performance thresholds will be determined by a facility background statistical demonstration.
13. Request application of a "Dilution Attenuation Factor (DAF)" of 2.2 for the ground water exposure pathway threshold values to establish the acceptable SSL performance threshold concentrations for parameters listed in Subsections A and B of 20.6.2.3103 NMAC rather than relying on the "background concentrations" or the laboratory PQLs. The leachate concentration that is protective of groundwater is back calculated by multiplying the groundwater standard for a given constituent by the DAF. Where there is not an "NMGW/MCL based SSL" listed in Table A-3 Summary of Soil-to-Groundwater Screening Levels, the most conservation Ambient Exposure Pathway value will be used. These values are presented in the attached Table – Soil-to-Groundwater Screening Levels with a DAF of 2.2.

    Rationale: A review of Section 4.3 DAF Values as a Function of Source Area, of the EPA document titled, DETERMINATION OF GROUNDWATER DILUTION ATTENUATION FACTORS FOR FIXED WASTE SITE AREAS USING EPACMTP, BACKGROUND DOCUMENT, EPA OFFICE OF SOLID WASTE, May 11, 1994, (live link) discusses the model simulations for different sized contaminated areas and identifies the rate of infiltration and the size of source area as the most sensitive input parameters. Section 4.3 - DAF Values as a Function of Source Area, also presents the DAF value as a function of source area for various well location scenarios. Table A1, from the EPA document provided below, gives the DAF values generated by the model for the 95th percentile for respective source areas.

Table A1
DAF values as a function of source area for base case scenario (x=25 ft., y=uniform in plume, z-nationwide distribution).

Area (sq. ft.)	Acres	DAF
1000	0.02	609.1
2000	0.05	187.69
5000	0.11	53.02
10000	0.23	22.57
30000	0.69	7.82
50000	1.15	5.41
70000	1.61	4.34
80000	1.84	3.97
150000	3.44	2.77
200000	4.59	2.37
500000	11.48	1.61
1000000	22.96	1.32
2000000	45.91	1.16
3000000	68.87	1.11
5000000	114.78	1.06

The chart below plots interpolated data from Table A1 illustrating the calculated DAF versus the source area.



The table below titled EPI Landfarm Cell Size and respective DAF, shows the DAF for each EPI landfarm cell as interpolated from the Table A1 data.

EPI Landfarm Cell Size and respective DAF[1]			
	Area (acres)	Area (square feet)	DAF
Cell #1	5.7	248292	2.2
Cell #2	2.3	100188	3.6
Cell #3	1.5	65340	4.6
Cell #4	2.1	91476	3.7
Cell #5	4.9	213444	2.3
Cell #6	5.8	252648	2.2
Cell #7	2.6	113256	3.4
Cell #8	3.0	130680	3.1
Cell #9	1.2	52272	5.3
Cell #10	3.5	152460	2.8
Cell #11	1.6	69696	4.5
Cell #12	2.2	95832	3.7
Cell #13	1.0	43560	6.1
Cell #14	0.2	8712	28.7
Cell #15	0.8	34848	7.2

[1]DAF derived from generic data presented in Table A1 - DAF values as a function of source area for base case scenario (x=25 ft., y=uniform in plume, z-nationwide distribution) of EPA document titled, DETERMINATION OF GROUNDWATER DILUTION ATTENUATION FACTORS FOR FIXED WASTE SITE AREAS USING EPACMTP, BACKGROUND DOCUMENT, EPA OFFICE OF SOLID WASTE, May 11, 1994

Confidence in the conservative nature of this approach is supported by the fact that the regional evaporation rate is an order of magnitude greater than the annual rainfall amount, i.e., approximately 100 inches per year versus 14-18 inches per year, respectively, (1999 & 2016 Lea County Regional Water Plan, New Mexico Office of the State Engineer) making impact to the unconfined aquifer (approximately 62 feet below ground surface ('bgs)), above the prescribed threshold, unlikely.

The conservative approach supports establishing the threshold concentrations for ground water exposure using a "Dilution Attenuation Factor (DAF)" of **2.2**.

14. Request to combine the following cells to approximate the sampling area size for a DAF of 2.2 for annual Treatment Zone Closure Sampling, Vadose Zone Monitoring Sampling, and Facility Closure Vadose Zone Sampling.

Proposed Treatment and Vadose Zone Sampling Scheme (The proposed sampling areas values are Bolded)				
Cell	DAF	Acres	Combined Acres	Interpolated DAF
1	2.2	5.7	**5.7**	2.2
2	3.6	2.3	**5.9**	2.2
3	4.6	1.5		
4	3.7	2.1		
5	2.3	**4.9**	2.3	2.3
6	2.2	**5.8**	2.2	2.2
7	3.4	2.6	**5.6**	2.2
8	3.1	3.0		
9	5.3	1.2	**4.7**	2.4
10	2.8	3.5		
11	4.5	1.6	**5.8**	2.2
12	3.7	2.2		
13	6.1	1.0		
14	28.7	0.2		
15	7.2	0.8		

15. Request to exclude the following analytes not considered associated with oil field wastes as referenced in 9.15.36.15.B Toxic pollutants listed in 20.6.2.7.T.2 NMAC:
    - Chloroalkyl Ethers (20.6.2.T.2(f) NMAC)
    - Nitroaromatics and high explosives (20.6.2.T.2(p) NMAC) anthropogenic in origin
    - Nitrosamines (20.6.2.T.2(q) NMAC) –
    - Perchlorate (20.6.2.T.2(r) NMAC) – laboratory chemical
    - Perfluorinated compounds (20.6.2.T.2(s) NMAC) – nonstick compounds
    - Endosulfan (20.6.2.T.2(t)(vi) NMAC) – laboratory chemical
    - Prometon (20.6.2.T.2(t)(xi) NMAC) - Industrial and scientific research uses.
    - Sulfolane (20.6.2.T.2(y) NMAC – laboratory chemical
16. Request the use of EPA Method 7471A for mercury in lieu of EPA Method 6010 or 6020.
17. Request that the emplaced soil in the cells and berms which have been remediated to the Treatment Zone closure standards in Subsection F of 19.15.36.15 NMAC, as modified previously in this minor permit modification, be left in place and or reused in an alternative manner upon clean closure of the facility as provided for in Subsection G of 19.15.36.15.1 NMAC. The berms will be sampled as a part of the Closure Plan.

18. Request Subsection C4 of 19.15.36.15 NMAC be modified to allow the existing roads, fences, and berms be left in place after closure to accommodate future alternative uses. There are no interior fences and the roads will be used to access and monitor the property after closure. The primary alternative use of the existing manmade berms separating the landfarm cells is to provide continued annual nesting habitat for the Burrowing Owl (Athene cunicularia) (USFW). There are currently 4 nesting pairs located around the site and are documented on the Cornell Lab of Ornithology eBird website.
19. Original Permit: Closure – 2.e - The area will be contoured, seeded with native grasses and allowed to return to its natural state. If the landowner desires to keep existing structures, berms, or fences for future alternative uses the structures, berms, or fences may be left in place. No Minor Modification is required here, in that, 36.18.f also provides for Alternatives to Re-Vegetation.

I appreciate your time in considering my request.

Sincerely,

Sherry K. Miller

Sherry K. Miller
President

Enclosure

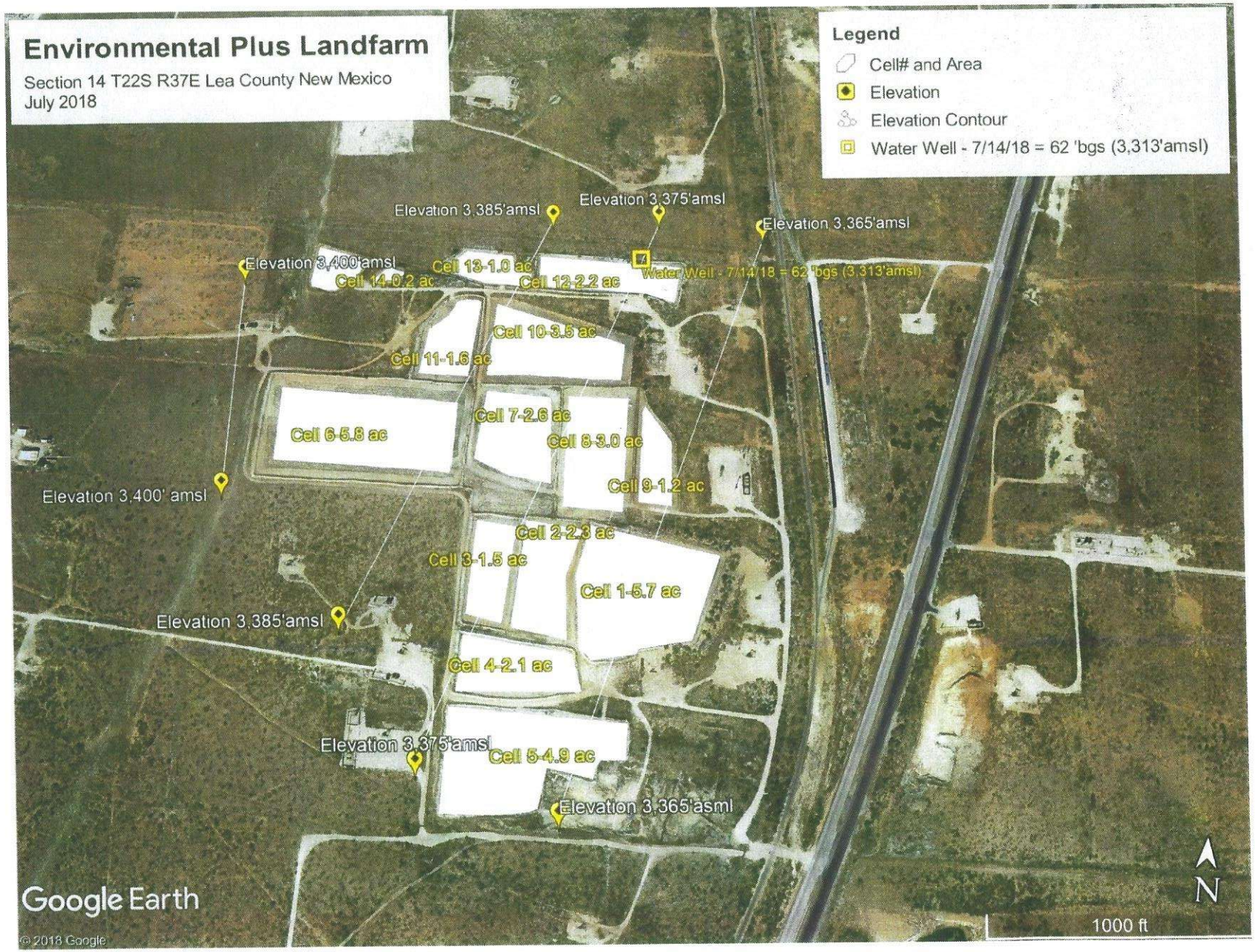


Table – Soil-to-Groundwater Screening Levels with a DAF of 2.2

(Highlighted Constituents are not considered a part of the source term and request not t0 be considered a Constituent of Concern.)
(**Bolded** values are the Soil Screening Level closure thresholds being proposed)

Constituent	Regulatory Citation	CAS	Risk-based SSL, DAF 1 (mg/kg)	Risk-based SSL, DAF 2.2 (mg/kg)	NMGW/MCL based SSL, DAF 2.2 (mg/kg)	NMGW/MCL based SSL, DAF 1 (mg/kg)	Screening Level Cw (mg/kg)
Antimony (Sb)	20.6.2.3103 A1	7440-36-0	3.28E-01	1.31E+00	**5.96E-01**	2.71E-01	6.56E+00
Arsenic (As)	20.6.2.3103 A1	7440-38-2	2.50E-02	**5.50E-02**	6.42E-01	2.92E-01	5.83E+00
Barium (Ba)	20.6.2.3103 A1	7440-39-3	1.35E+02	2.97E+02	**1.81E+02**	8.23E+01	2.70E+03
Beryllium (Be)	20.6.2.3103 A1	7440-41-7	9.79E+00	2.15E+01	**6.95E+00**	3.16E+00	1.96E+02
Cadmium (Cd)	20.6.2.3103 A1	7440-43-9	4.69E-01	1.03E+00	**8.27E-01**	3.76E-01	9.39E+00
Chromium (Cr)	20.6.2.3103 A1		1.03E+04	**2.27E+04**	3.96E+05	1.80E+05	2.05E+05
Cyanide (CN)	20.6.2.3103 A1	57-12-5	2.61E-04	**5.74E-04**	7.83E-02	3.56E-02	7.13E-01
Fluoride (F)	20.6.2.3103 A1	7782-41-4	1.78E+02	3.92E+02	**1.32E+03**	6.01E+02	1.20E+04
Lead (Pb)	20.6.2.3103 A1	7439-92-1			**2.97E+01**	1.35E+01	2.70E+02
Total Mercury (Hg)	20.6.2.3103 A1	7439-97-6	3.27E-02	**7.19E-02**	2.29E-01	1.04E-01	2.09E+00
Nitrate (NO3 as N)	20.6.2.3103 A1	14797-55-8	2.13E+01	4.69E+01	**1.48E+01**	6.73E+00	4.25E+02
Nitrite (NO2 as N)	20.6.2.3103 A1	14797-65-0	1.33E+00	2.93E+00	**1.48E+00**	6.73E-01	2.66E+01
Selenium (Se)	20.6.2.3103 A1	7782-49-2	5.11E-01	1.12E+00	**5.70E-01**	2.59E-01	1.02E+01
Silver (Ag)	20.6.2.3103 A1	7440-22-4	6.88E-01	**1.51E+00**			1.38E+01
Thallium (Tl)	20.6.2.3103 A1	7440-28-0	1.41E-02	**3.10E-02**	3.12E-01	1.42E-01	2.85E+00
Uranium (U)	20.6.2.3103 A1	--	2.67E+01	**5.87E+01**			5.33E+02
acrolein	20.6.2.3103 A2	107-02-8	7.29E-06	**1.60E-05**			1.46E-04
acrylonitrile	20.6.2.3103 A2	107-13-1	9.77E-05	**2.15E-04**			1.95E-03
Aldrin	20.6.2.3103 A2	309-00-2	2.44E-04	**5.37E-04**			4.88E-03
anthracene	20.6.2.3103 A2	120-12-7	4.25E+01	**9.35E+01**			8.51E+02
benzidine	20.6.2.3103 A2	92-87-5	2.13E-06	**4.69E-06**			4.27E-05

Table – Soil-to-Groundwater Screening Levels with a DAF of 2.2

(Highlighted Constituents are not considered a part of the source term and request not t0 be considered a Constituent of Concern.)
(**Bolded** values are the Soil Screening Level closure thresholds being proposed)

Constituent	Regulatory Citation	CAS	Risk-based SSL, DAF 1 (mg/kg)	Risk-based SSL, DAF 2.2 (mg/kg)	NMGW/MCL based SSL, DAF 2.2 (mg/kg)	NMGW/MCL based SSL, DAF 1 (mg/kg)	Screening Level Cw (mg/kg)
3,4-benzofluoranthene	20.6.2.3103 A2	205-99-2	3.09E-01	**6.80E-01**			6.17E+00
benzo(k)fluoranthene	20.6.2.3103 A2	207-08-9	3.02E+00	**6.64E+00**			6.05E+01
beta-HCH; gamma-HCH; and, technical-HCH	20.6.2.3103 A2	319-85-7	1.06E-03	**2.33E-03**			2.13E-02
hexachlorocyclohexane (HCH, lindane): alpha-HCH	20.6.2.3103 A2	58-89-9	1.82E-03	**4.00E-03**			3.64E-02
bis (2-chloroethyl) ether	20.6.2.3103 A2	111-44-4	3.03E-05	**6.67E-05**			6.05E-04
bis (2-chloroisopropyl) ether	20.6.2.3103 A2	108-60-1	2.38E-03	**5.24E-03**			4.75E-02
di-2-ethylhexyl phthalate (DEHP)	20.6.2.3103 A2	117-81-7	9.99E+00	2.20E+01	**2.38E+00**	1.08E+00	2.00E+02
bis (chloromethyl) ether	20.6.2.3103 A2	542-88-1	1.50E-07	**3.30E-07**			3.00E-06
bromodichloromethane	20.6.2.3103 A2	75-27-4	3.10E-04	**6.82E-04**			6.21E-03
bromomethane	20.6.2.3103 A2	74-83-9	1.71E-03	**3.76E-03**			3.43E-02
chlordane	20.6.2.3103 A2	12789-03-6	2.28E-02	**5.02E-02**	2.24E-01	1.02E-01	2.03E+00
monochlorobenzene	20.6.2.3103 A2	108-90-7	4.18E-02	**9.20E-02**	1.19E-01	5.39E-02	1.08E+00
chloromethane	20.6.2.3103 A2	74-87-3	4.76E-03	**1.05E-02**			9.52E-02
DDT	20.6.2.3103 A2	50-29-3	5.80E-01	**1.28E+00**			1.16E+01
dichlorobenzidine	20.6.2.3103 A2	91-94-1	6.21E-03	**1.37E-02**			1.24E-01
dichlorodifluoromethane (fluorocarbon-12)	20.6.2.3103 A2	75-71-8	3.61E-01	**7.94E-01**			7.23E+00
dichloropropenes	20.6.2.3103 A2	542-75-6	1.40E-03	**3.08E-03**			2.81E-02

Table – Soil-to-Groundwater Screening Levels with a DAF of 2.2

(Highlighted Constituents are not considered a part of the source term and request not t0 be considered a Constituent of Concern.)
(**Bolded** values are the Soil Screening Level closure thresholds being proposed)

Constituent	Regulatory Citation	CAS	Risk-based SSL, DAF 1 (mg/kg)	Risk-based SSL, DAF 2.2 (mg/kg)	NMGW/MCL based SSL, DAF 2.2 (mg/kg)	NMGW/MCL based SSL, DAF 1 (mg/kg)	Screening Level Cw (mg/kg)
dieldrin	20.6.2.3103 A2	60-57-1	5.32E-04	**1.17E-03**			1.06E-02
diethyl phthalate (DEP)	20.6.2.3103 A2	84-66-2	4.89E+00	**1.08E+01**			9.79E+01
dibutyl phthalate	20.6.2.3103 A2	84-74-2	1.69E+00	**3.72E+00**			3.38E+01
dimethyl phthalate (DMP)	20.6.2.3103 A2	100-21-0	1.78E-01	**3.92E-01**			3.57E+00
2,4-dinitro-o-cresol	20.6.2.3103 A2	534-52-1	1.99E-03	**4.38E-03**			3.98E-02
2,4-dinitrotoluene (2,4-DNT)	20.6.2.3103 A2	121-14-2	2.46E-03	**5.41E-03**			4.92E-02
2,6-dinitrotoluene (2,6-DNT)	20.6.2.3103 A2	606-20-2	5.12E-04	**1.13E-03**			1.02E-02
1,4-dioxane	20.6.2.3103 A2	123-91-1	8.14E-04	**1.79E-03**			1.63E-02
diphenylhydrazine	20.6.2.3103 A2	122-66-7	1.90E-03	**4.18E-03**			3.79E-02
endosulfan	20.6.2.3103 A2	115-29-7	1.02E+00	**2.24E+00**			2.04E+01
endrin	20.6.2.3103 A2	72-20-8	6.77E-02	1.49E-01	**1.33E-01**	6.06E-02	1.35E+00
fluoranthene	20.6.2.3103 A2	206-44-0	6.69E+01	**1.47E+02**			1.34E+03
fluorene	20.6.2.3103 A2	86-73-7	4.00E+00	**8.80E+00**			8.00E+01
heptachlor	20.6.2.3103 A2	76-44-8	1.37E-03	**3.01E-03**	5.46E-02	2.48E-02	4.97E-01
hexachlorobenzene	20.6.2.3103 A2	118-74-1	9.25E-04	**2.04E-03**	2.08E-02	9.47E-03	1.89E-01
hexachlorobutadiene	20.6.2.3103 A2	87-68-3	2.07E-03	**4.55E-03**			4.13E-02
hexachlorocyclopentadiene	20.6.2.3103 A2	77-47-4	9.88E-04	**2.17E-03**	2.64E-01	1.20E-01	2.40E+00
hexachloroethane	20.6.2.3103 A2	67-72-1	1.60E-03	**3.52E-03**			3.20E-02

Table – Soil-to-Groundwater Screening Levels with a DAF of 2.2

(Highlighted Constituents are not considered a part of the source term and request not t0 be considered a Constituent of Concern.)
(**Bolded** values are the Soil Screening Level closure thresholds being proposed)

Constituent	Regulatory Citation	CAS	Risk-based SSL, DAF 1 (mg/kg)	Risk-based SSL, DAF 2.2 (mg/kg)	NMGW/MCL based SSL, DAF 2.2 (mg/kg)	NMGW/MCL based SSL, DAF 1 (mg/kg)	Screening Level Cw (mg/kg)
octrahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	20.6.2.3103 A2	2691-41-0	9.72E-01	**2.14E+00**			1.94E+01
isophorone	20.6.2.3103 A2	78-59-1	2.12E-01	**4.66E-01**			4.23E+00
1-methylnaphthalene	20.6.2.3103 A2	90-12-0	4.47E-02	**9.83E-02**			8.93E-01
2-methylnaphthalene	20.6.2.3103 A2	91-57-6	1.38E-01	**3.04E-01**			2.76E+00
nitrobenzene	20.6.2.3103 A2	98-95-3	7.20E-04	**1.58E-03**			1.44E-02
N-nitrosodiethylamine	20.6.2.3103 A2	55-18-5	4.97E-07	**1.09E-06**			9.94E-06
N-nitrosodimethylamine	20.6.2.3103 A2	62-75-9	1.02E-06	**2.24E-06**			2.04E-05
N-nitrosodibutylamine	20.6.2.3103 A2	924-16-3	4.21E-05	**9.26E-05**			8.42E-04
N-nitrosodiphenylamine	20.6.2.3103 A2	86-30-6	5.02E-01	**1.10E+00**			1.00E+01
N-nitrosopyrrolidine	20.6.2.3103 A2	930-55-2	1.15E-04	**2.53E-04**			2.30E-03
pentachlorobenzene	20.6.2.3103 A2	608-93-5	1.76E-02	**3.87E-02**			3.52E-01
perchlorate	20.6.2.3103 A2	14797-73-0	5.85E-03	1.29E-02	**1.40E-03**	6.35E-04	1.17E-01
perfluorohexane sulfonic acid (PHHxS)	20.6.2.3103 A2	335-46-4	6.95E-05	**1.53E-04**			1.39E-03
perfluorooctane sulfonate (PFOS)	20.6.2.3103 A2	2795-39-3	1.04E-05	**2.29E-05**			2.09E-04
perfluorooctanoic acid (PFOA)	20.6.2.3103 A2	335-67-1	9.13E-04	**2.01E-03**			1.83E-02
phenanthrene	20.6.2.3103 A2	85-01-8	4.30E+00	**9.46E+00**			8.59E+01
prometon	20.6.2.3103 A2	1610-18-0	9.58E-02	**2.11E-01**			1.92E+00
pyrene	20.6.2.3103 A2	129-00-0	9.59E+00	**2.11E+01**			1.92E+02

Table – Soil-to-Groundwater Screening Levels with a DAF of 2.2

(Highlighted Constituents are not considered a part of the source term and request not t0 be considered a Constituent of Concern.)
(**Bolded** values are the Soil Screening Level closure thresholds being proposed)

Constituent	Regulatory Citation	CAS	Risk-based SSL, DAF 1 (mg/kg)	Risk-based SSL, DAF 2.2 (mg/kg)	NMGW/MCL based SSL, DAF 2.2 (mg/kg)	NMGW/MCL based SSL, DAF 1 (mg/kg)	Screening Level Cw (mg/kg)
hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	20.6.2.3103 A2	121-82-4	2.96E-03	**6.51E-03**			5.93E-02
thiolane 1,1 dioxide (sulfolane)	20.6.2.3103 A2	126-33-0	3.75E-03	**8.25E-03**			7.49E-02
1,2,4,5-tetrachlorobenzene	20.6.2.3103 A2	95-94-3	5.83E-03	**1.28E-02**			1.17E-01
(xii) toxaphene	20.6.2.3103 A2	8001-35-2	1.83E-02	**4.03E-02**	7.66E-01	3.48E-01	6.96E+00
tribromomethane (bromoform)	20.6.2.3103 A2	75-25-2	7.34E-03	**1.61E-02**			1.47E-01
trichlorofluoromethane (fluorocarbon-11)	20.6.2.3103 A2	75-69-4	7.84E-01	**1.72E+00**			1.57E+01
2,4,6-trinitrotoluene (TNT)	20.6.2.3103 A2	118-96-7	4.30E-02	**9.46E-02**			8.61E-01
atrazine	20.6.2.3103 A1 & A2	1912-24-9	1.70E-03	3.74E-03	**3.32E-03**	1.51E-03	3.41E-02
Benzene	20.6.2.3103 A1 & A2	71-43-2	1.90E-03	**4.18E-03**	4.60E-03	2.09E-03	4.18E-02
benzo-a-pyrene	20.6.2.3103 A1 & A2	50-32-8	2.21E-01	4.86E-01	**3.87E-01**	1.76E-01	4.42E+00
Carbon Tetrachloride	20.6.2.3103 A1 & A2	56-23-5	1.67E-03	**3.67E-03**	4.05E-03	1.84E-03	3.67E-02
chloroform	20.6.2.3103 A1 & A2	67-66-3	5.46E-04	**1.20E-03**			1.09E-02
ethylene dibromide (EDB)	20.6.2.3103 A1 & A2	106-93-4	1.76E-05	3.87E-05	**2.60E-05**	1.18E-05	3.52E-04

Table – Soil-to-Groundwater Screening Levels with a DAF of 2.2

(Highlighted Constituents are not considered a part of the source term and request not t0 be considered a Constituent of Concern.)
(**Bolded** values are the Soil Screening Level closure thresholds being proposed)

Constituent	Regulatory Citation	CAS	Risk-based SSL, DAF 1 (mg/kg)	Risk-based SSL, DAF 2.2 (mg/kg)	NMGW/MCL based SSL, DAF 2.2 (mg/kg)	NMGW/MCL based SSL, DAF 1 (mg/kg)	Screening Level Cw (mg/kg)
1,2-dichlorobenzene	20.6.2.3103 A1 & A2	95-50-1	2.29E-01	**5.04E-01**	9.99E-01	4.54E-01	9.08E+00
1,4-dichlorobenzene	20.6.2.3103 A1 & A2	106-46-7	3.60E-03	**7.92E-03**	1.23E-01	5.61E-02	1.12E+00
1,1-dichloroethane	20.6.2.3103 A1 & A2	75-34-3	6.80E-03	**1.50E-02**			1.36E-01
1,2-dichloroethane (EDC)	20.6.2.3103 A1 & A2	107-06-2	4.07E-04	**8.95E-04**	2.62E-03	1.19E-03	2.38E-02
cis-1,2-dichloroethene	20.6.2.3103 A1 & A2	156-59-2	9.18E-03	**2.02E-02**	3.87E-02	1.76E-02	3.52E-01
trans-1,2-dichloroethene	20.6.2.3103 A1 & A2	156-60-5	1.71E-02	**3.76E-02**	5.54E-02	2.52E-02	5.03E-01
1,1-dichloroethylene (1,1-DCE)	20.6.2.3103 A1 & A2	75-35-4	9.74E-02	2.14E-01	**5.28E-03**	2.40E-03	1.95E+00
2,4-dichlorophenol	20.6.2.3103 A1 & A2	120-83-2	4.13E-02	**9.09E-02**			8.25E-01
1,2-dichloropropane (PDC)	20.6.2.3103 A1 & A2	78-87-5	1.21E-03	**2.66E-03**	3.06E-03	1.39E-03	2.77E-02
dinitrophenols	20.6.2.3103 A1 & A2	51-28-5	3.34E-02	**7.35E-02**			6.69E-01
ethylbenzene	20.6.2.3103 A1 & A2	100-41-4	1.32E-02	**2.90E-02**	1.35E+00	6.15E-01	1.23E+01
methylene chloride	20.6.2.3103 A1 & A2	75-09-2	2.35E-02	5.17E-02	**2.44E-03**	1.11E-03	4.71E-01
PAHs: total naphthalene plus	20.6.2.3103 A1 & A2	91-20-3	2.91E-03	**6.40E-03**			5.83E-02

Table – Soil-to-Groundwater Screening Levels with a DAF of 2.2

(Highlighted Constituents are not considered a part of the source term and request not t0 be considered a Constituent of Concern.)
(**Bolded** values are the Soil Screening Level closure thresholds being proposed)

Constituent	Regulatory Citation	CAS	Risk-based SSL, DAF 1 (mg/kg)	Risk-based SSL, DAF 2.2 (mg/kg)	NMGW/MCL based SSL, DAF 2.2 (mg/kg)	NMGW/MCL based SSL, DAF 1 (mg/kg)	Screening Level Cw (mg/kg)
monomethylnaphthalenes							
pentachlorophenol	20.6.2.3103 A1 & A2	87-86-5	3.14E-03	**6.91E-03**	1.67E-02	7.61E-03	1.52E-01
Aroclor 1016	20.6.2.3103 A1 & A2	12674-11-2	1.01E-01	2.22E-01	**7.90E-02**	3.59E-02	2.01E+00
Aroclor 1221	20.6.2.3103 A1 & A2	11104-28-2	7.17E-04	**1.58E-03**			1.43E-02
Aroclor 1232	20.6.2.3103 A1 & A2	11141-16-5	7.17E-04	**1.58E-03**			1.43E-02
Aroclor 1242	20.6.2.3103 A1 & A2	53469-21-9	9.22E-03	**2.03E-02**			1.84E-01
Aroclor 1248	20.6.2.3103 A1 & A2	12672-29-6	9.04E-03	**1.99E-02**			1.81E-01
Aroclor 1254	20.6.2.3103 A1 & A2	11097-69-1	1.54E-02	**3.39E-02**			3.08E-01
Aroclor 1260	20.6.2.3103 A1 & A2	11096-82-5	4.13E-02	**9.09E-02**			8.25E-01
2,2',3,3',4,4',5-Heptachlorobiphenyl (PCB 170)	20.6.2.3103 A1 & A2	35065-30-6	3.21E-02	**7.06E-02**			6.42E-01
2,2',3,4,4',5,5'-Heptachlorobiphenyl (PCB 180)	20.6.2.3103 A1 & A2	35065-29-3	3.14E-01	**6.91E-01**			6.29E+00

Table – Soil-to-Groundwater Screening Levels with a DAF of 2.2

(Highlighted Constituents are not considered a part of the source term and request not t0 be considered a Constituent of Concern.)
(**Bolded** values are the Soil Screening Level closure thresholds being proposed)

Constituent	Regulatory Citation	CAS	Risk-based SSL, DAF 1 (mg/kg)	Risk-based SSL, DAF 2.2 (mg/kg)	NMGW/MCL based SSL, DAF 2.2 (mg/kg)	NMGW/MCL based SSL, DAF 1 (mg/kg)	Screening Level Cw (mg/kg)
2,3,3',4,4',5,5'-Heptachlorobiphenyl (PCB 189)	20.6.2.3103 A1 & A2	39635-31-9	2.07E-02	**4.55E-02**			4.15E-01
2,3',4,4',5,5'-Hexachlorobiphenyl (PCB 167)	20.6.2.3103 A1 & A2	52663-72-6	1.24E-02	**2.73E-02**			2.48E-01
2,3,3',4,4',5'-Hexachlorobiphenyl (PCB 157)	20.6.2.3103 A1 & A2	69782-90-7	1.27E-02	**2.79E-02**			2.53E-01
2,3,3',4,4',5-Hexachlorobiphenyl (PCB 156)	20.6.2.3103 A1 & A2	38380-08-4	1.27E-02	**2.79E-02**			2.53E-01
3,3',4,4',5,5'-Hexachlorobiphenyl (PCB 169)	20.6.2.3103 A1 & A2	32774-16-6	1.24E-05	**2.73E-05**			2.48E-04
2',3,4,4',5-Pentachlorobiphenyl (PCB 123)	20.6.2.3103 A1 & A2	65510-44-3	7.74E-03	**1.70E-02**			1.55E-01
2',3',4,4',5-Pentachlorobiphenyl (PCB 118)	20.6.2.3103 A1 & A2	31508-00-6	7.59E-03	**1.67E-02**			1.52E-01

Table – Soil-to-Groundwater Screening Levels with a DAF of 2.2

(Highlighted Constituents are not considered a part of the source term and request not t0 be considered a Constituent of Concern.)
(**Bolded** values are the Soil Screening Level closure thresholds being proposed)

Constituent	Regulatory Citation	CAS	Risk-based SSL, DAF 1 (mg/kg)	Risk-based SSL, DAF 2.2 (mg/kg)	NMGW/MCL based SSL, DAF 2.2 (mg/kg)	NMGW/MCL based SSL, DAF 1 (mg/kg)	Screening Level Cw (mg/kg)
2',3,3',4,4'-Pentachlorobiphenyl (PCB 105)	20.6.2.3103 A1 & A2	32598-14-4	7.74E-03	**1.70E-02**			1.55E-01
2,3,4,4',5-Pentachlorobiphenyl (PCB 114)	20.6.2.3103 A1 & A2	74472-37-0	7.74E-03	**1.70E-02**			1.55E-01
3,3',4,4',5-Pentachlorobiphenyl (PCB 126)	20.6.2.3103 A1 & A2	57465-28-8	2.28E-06	**5.02E-06**			4.55E-05
3,3',4,4'-Tetrachlorobiphenyl (PCB 77)	20.6.2.3103 A1 & A2	32598-13-3	7.03E-03	**1.55E-02**			1.41E-01
3,4,4',5-Tetrachlorobiphenyl (PCB 81)	20.6.2.3103 A1 & A2	70362-50-4	4.64E-04	**1.02E-03**			9.27E-03
styrene	20.6.2.3103 A1 & A2	100-42-5	1.03E+00	2.27E+00	**1.88E-01**	8.55E-02	2.06E+01
1,1,2,2-tetrachloroethane	20.6.2.3103 A1 & A2	79-34-5	1.80E-03	**3.96E-03**			3.60E-02
tetrachloroethylene (PCE)	20.6.2.3103 A1 & A2	127-18-4	1.60E-02	3.52E-02	**4.38E-03**	1.99E-03	3.21E-01
Toluene	20.6.2.3103 A1 & A2	108-88-3	6.07E-01	1.34E+00	**1.22E+00**	5.55E-01	1.21E+01
1,2,4-trichlorobenzene	20.6.2.3103 A1 & A2	120-82-1	8.82E-03	**1.94E-02**	3.41E-01	1.55E-01	3.10E+00

Table – Soil-to-Groundwater Screening Levels with a DAF of 2.2

(Highlighted Constituents are not considered a part of the source term and request not t0 be considered a Constituent of Concern.)
(**Bolded** values are the Soil Screening Level closure thresholds being proposed)

Constituent	Regulatory Citation	CAS	Risk-based SSL, DAF 1 (mg/kg)	Risk-based SSL, DAF 2.2 (mg/kg)	NMGW/MCL based SSL, DAF 2.2 (mg/kg)	NMGW/MCL based SSL, DAF 1 (mg/kg)	Screening Level Cw (mg/kg)
1,1,1-trichloroethane	20.6.2.3103 A1 & A2	71-55-6	2.55E+00	5.61E+00	**1.40E-01**	6.38E-02	5.11E+01
1,1,2-trichloroethane	20.6.2.3103 A1 & A2	79-00-5	1.11E-04	**2.44E-04**	2.95E-03	1.34E-03	2.68E-02
trichloroethylene (TCE)	20.6.2.3103 A1 & A2	79-01-6	8.04E-04	**1.77E-03**	3.41E-03	1.55E-03	3.10E-02
2,4,5-trichlorophenol	20.6.2.3103 A1 & A2	95-95-4	3.31E+00	**7.28E+00**			6.62E+01
2,4,6-trichlorophenol	20.6.2.3103 A1 & A2	88-06-2	3.37E-02	**7.41E-02**			6.74E-01
vinyl chloride	20.6.2.3103 A1 & A2	75-01-4	1.08E-04	**2.38E-04**	1.47E-03	6.70E-04	1.34E-02
total xylenes	20.6.2.3103 A1 & A2	1330-20-7	1.49E-01	**3.28E-01**	1.70E+01	7.72E+00	1.54E+02
Phenol(s)	20.6.2.3103 A1, A2, & B	108-95-2	2.62E+00	**5.76E+00**			5.23E+01
Copper (Cu)	20.6.2.3103 B	7440-50-8	2.78E+01	**6.12E+01**	1.01E+02	4.57E+01	9.15E+02
Iron (Fe)	20.6.2.3103 B	7439-89-6	3.48E+02	**7.66E+02**			6.96E+03
Manganese (Mn)	20.6.2.3103 B	7439-96-5	1.31E+02	**2.88E+02**			2.63E+03
Zinc (Zn)	20.6.2.3103 B	7440-66-6	3.71E+02	**8.16E+02**			7.41E+03
Methyl tertiary-butyl ether (MTBE)	20.6.2.3103 A2 & B	1634-04-4	2.77E-02	**6.09E-02**			5.53E-01
Non-Risk Based Compliance Thresholds							

Table – Soil-to-Groundwater Screening Levels with a DAF of 2.2

(Highlighted Constituents are not considered a part of the source term and request not t0 be considered a Constituent of Concern.)
(**Bolded** values are the Soil Screening Level closure thresholds being proposed)

Constituent	Regulatory Citation	CAS	Risk-based SSL, DAF 1 (mg/kg)	Risk-based SSL, DAF 2.2 (mg/kg)	NMGW/MCL based SSL, DAF 2.2 (mg/kg)	NMGW/MCL based SSL, DAF 1 (mg/kg)	Screening Level Cw (mg/kg)
Radioactivity: Combined Radium-226 and Radium-228	20.6.2.3103 A1	13982-63-3 15262-20-1	**5 pCi/l**				
Sulfate (SO4)	20.6.2.3103 B	14808-79-8	**600 mg/L**				
Total Dissolved Solids (TDS)	20.6.2.3103 B		**1000 mg/L**				
pH	20.6.2.3103 B		**>6 but <9**				

A Background Study and statistical demonstration per NMAC 19.15.36.B will be used to establish the Compliance/Closure thresholds for:
Chloride
Total Petroleum Hydrocarbon - The Sum of Gasoline, Diesel, and Motor-oil Range Organics, i.e., GRO+DRO+MRO = TPH
Benzene
BTEX - Sum of Benzene, Toluene, Ethylbenzene, and Xylenes

Jones, Brad, EMNRD

From: Jones, Brad, EMNRD
Sent: Thursday, November 10, 2022 2:51 PM
To: Sherry.EPI@gmail.com
Cc: Pat McCasland
Subject: NM1-13 Environmental Plus Inc - Permit Minor Modification and Exception Requests Approval
Attachments: 2022 1110 NM1-013 Environmental Plus Inc Permit Minor Modification Request Approval signed.pdf

Ms. Miller,

Please see the attached. OCD has completed the review of the September 19, 2022, minor modification requests to existing permit conditions under the commercial surface waste management facility permit, NM1-013, and exception requests regarding compliance to the transitional provisions of 19.15.36.20 NMAC. If you have any questions regarding this matter, please do not hesitate to contact me.

Sincerely,

Brad Jones

Brad A. Jones ● Environmental Scientist Specialist - Advanced
Environmental Bureau
EMNRD - Oil Conservation Division
1220 S. Saint Francis Drive | Santa Fe, New Mexico 87505
(505) 469-7486 | brad.a.jones@emnrd.nm.gov
www.emnrd.nm.gov

State of New Mexico
Energy, Minerals and Natural Resources Department

November 10, 2022

Sherry Miller
Environmental Plus Inc.
PO Box 1558
Eunice, New Mexico 88231
Sherry.EPI@gmail.com

RE: Permit Minor Modification and Exception Requests Approval
Environmental Plus Inc. (OGRID 195265)
Environmental Plus Landfarm, Permit NM1-013
Location: SW/4 NW/4 and the NW/4 NW/4 of Section 14, and the SE/4 NE/4 and the NE/4 NE/4 of Section 15, Township 22 South, Range 37 East, NMPM
Lea County, New Mexico

Dear Ms. Miller:

The Oil Conservation Division (OCD) has completed its review of Environmental Plus Inc.'s (EPI) minor modification requests, dated September 19, 2022, to existing permit conditions under the commercial surface waste management facility permit, NM1-013, and exception requests regarding compliance to the transitional provisions of 19.15.36.20 NMAC.

EPI has requested the following 19 minor modifications and exceptions:

1. EPI requests to modify Condition 13 of the permit, under the heading Landfarm Operations, to comply with the additional lift requirements of 19.15.36.15.D NMAC;

2. EPI requests to modify Condition 5 of the permit, under the heading Landfarm Operations, to cease bi-weekly tilling operations of the remaining active cells, once EPI's semi-annual treatment zone monitoring results demonstrate that the treatment zone soil concentrations satisfy the successive lift standards of 19.15.36.15.D NMAC;

3. EPI requests an exception to utilize EPA Method 8015M or 8015M Extended and the sum of Gasoline Range Organics (GRO), Diesel Range Organics (DRO) and Motor Range Organics (MRO) in lieu of EPA Method 418.1 for Total Petroleum Hydrocarbons (TPH) to establish background for TPH and to conduct all future vadose zone and treatment zone monitoring;

4. EPI requests an exception to utilize Standard Method SM4500Cl-B in addition to EPA Method 300.1 for chloride to establish background for chloride and to conduct all future vadose zone and treatment zone monitoring for closure and post-closure soil analysis;

5. EPI requests to modify Condition 1 of the permit, under the heading Treatment (vadose under Part 36) Zone Monitoring, to collect vadose zone samples from 3 to 4 feet below native ground surface in compliance with 19.15.36.15.E(1) NMAC requirements, instead of 2 to 3 feet below native ground surface as required by the permit;

6. EPI requests to modify the permit so that vadose zone monitoring frequency be adjusted from quarterly to semi-annually in compliance with 19.15.36.15.E(2) NMAC requirements;

7. EPI requests an exception to the semi-annual vadose sampling required of 19.15.36.15.E(2) NMAC, to reduce the vadose zone sampling frequency to annually if the treatment zone soils have attained closure since there is no potential for increased impact to the vadose zone;

8. EPI requests to modify Conditions 1 and 3 of the permit, under the heading Reporting, to be replaced with the record keeping requirements of 19.15.36.15.E(4) NMAC;

9. EPI requests to modify Condition 2 of the permit, under the heading Reporting, to be replaced with the release response notification of 19.15.36.15.E(5) NMAC;

10. EPI requests to modify Condition 3 of the permit, under the heading Treatment (vadose under Part 36) Zone Monitoring, to allow sample excavations and boreholes to be backfilled with the excavated soils rather than with an impermeable material such as cement or bentonite;

11. EPI requests an exception to the references to the “background soil concentrations” in 19.15.36.15.E(2) NMAC and 19.15.36.15.F(2) NMAC. These compliance standards will be replaced by the most stringent specific risked base concentrations provided in the June 2022 NMED Risk Assessment Guidance for Site Investigations and Remediation, Volume I, Soil Screening Guidance for Human Health Risk Assessments. The basis of the request is due to current and historical oil and gas drilling and production activities and the concern of sampling an unknown legacy location that could upset the comparison of the treatment vadose zone analytical closure results with the expected “non-detect” background concentrations for the constituents of concern. A background sampling plan will be developed and submitted for NMOCD approval to establish the specific Rule 36 regulatory thresholds for GRO, DRO, TPH, BTEX and Chloride and will use the EPA ProUCL 5.1 program to support the facility background statistical demonstration;

12. EPI requests an exception to the background testing requirements of 19.15.36.15.B NMAC to apply the New Mexico groundwater/maximum contaminant level soil screening levels (NMGW/MCL SSLs) listed in Table A-3, Summary of Soil-to-Groundwater Screening Levels, from the June 2022 NMED Risk Assessment Guidance for Site Investigations and Remediation, Volume I, Soil Screening Guidance for Human Health Risk Assessments for each constituent listed in Subsections A and B of 20.6.2.3103 NMAC. The most stringent SSL of the ambient and MCL based exposure screening levels will be applied. This risked based approach will not apply initially to GRO, DRO, TPH, BTEX and Chloride; performance thresholds will be determined by a facility background statistical demonstration;

13. EPI requests an exception to the background testing requirements of 19.15.36.15.B NMAC to use a dilution attenuation factor (DAF) of 2.2 for the groundwater exposure pathway threshold values to establish acceptable SSL performance threshold concentrations for the constituents listed in Subsections A and B of 20.6.2.3103 NMAC rather than relying on the background concentrations or the laboratory PQLs;

14. EPI requests to modify Condition 1 of the permit, under the heading Treatment Zone Monitoring, to combine certain landfarm cells to the appropriate sampling size for a DAF of 2.2 for annual treatment zone closure sampling, vadose zone monitoring sampling, and vadose zone closure sampling. The combining of certain landfarm cells will result in landfarm cells being larger than five (5) acres;

15. EPI requests an exception to exclude the following toxic pollutants, listed in 20.6.2.7.T(2) NMAC from the facility background demonstration required of 19.15.36.15.B NMAC, since the analytes are not considered associated with oil field waste, as referenced:
    a. chloroalkyl ethers (20.6.2.7.T(2)(f) NMAC).
    b. nitroaromatics and high explosives (20.6.2.7.T(2)(p) NMAC) – anthropogenic in origin.
    c. Nitrosamines (20.6.2.7.T(2)(q) NMAC).
    d. Perchlorate (20.6.2.7.T(2)(r) NMAC) – laboratory chemical.
    e. Perfluorinated-chemicals (20.6.2.7.T(2)(s) NMAC) – nonstick compounds.
    f. Endosulfan (20.6.2.7.T(2)(t)(vi) NMAC) – laboratory chemical.
    g. Prometon (20.6.2.7.T(2)(t)(xi) NMAC) – industrial and scientific research uses.
    h. thiolane 1,1 dioxide (sulfolane) (20.6.2.7.T(2)(y) NMAC) – laboratory chemical.

16. EPI requests an exception to utilize EPA Method 7471 in lieu of EPA Methods 6010B or 6020 for mercury to conduct all future vadose zone and treatment zone monitoring;

17. EPI requests that treatment zone soils within the landfarm cells and used to construct the berms, which have been remediated to the treatment zone closure performance standards of 19.15.36.15.F NMAC (as modified as requested in this minor modification) be left in place and/or reused in an alternative manner as provided in 19.15.36.15.G(1) NMAC, upon clean closure of the facility. The berms will be sampled as part of the closure plan;

18. EPI requests an exception to the closure requirements of 19.15.36.18.C.(4)(f) NMAC to allow the existing fences, roads, and berms to be left in place after closure to accommodate future alternative uses. There are no interior fences and the roads will be used to access and monitor the property after closure. The primary alternative use of the existing manmade berms separating the landfarm cells is to provide continued annual nesting for the Burrowing Owl (Athene cunicularia). There are currently four nesting pair located around the site; and

19. EPI recognizes Condition 2e of the permit, under the heading Closure, that states “The area will be contoured, seeded with native grasses, and allowed to return to its natural state. If the landowner desires to keep existing structures, berms, or fences for future alternative uses the structures, berms, or fences may be left in place”. EPI clarifies that no modification is required here, in that 19.15.36.18.F NMAC also provides for alternatives to re-vegetation.

OCD was unable to consider the approval of the following permit modification requests and/or exception requests for the reasons identified below:

- Request 7: OCD is denying this request because vadose zone monitoring is no longer required for a landfarm cell once approved for closure by OCD pursuant to an OCD approved closure and post-closure plan.

- Request 8: In accordance with Condition 1 of the permit, under the heading Reporting, "Analytical results from the treatment (vadose under Part 36) zone monitoring must be submitted to the OCD Santa Fe office within 30 days of receipt from the laboratory." Based upon the administrative record for Permit NM1-13, the permit required quarterly vadose zone monitoring analytical results have not been submitted to OCD for several years. OCD is denying this request to ensure the required vadose zone sampling is performed, the analytical results are assessed properly for unauthorized releases and to ensure the release response requirements of 19.15.36.15.E(5) NMAC are demonstrated and complied with, if applicable.

  In accordance with Condition 3 of the permit, under the heading Reporting, "Records of landfarm inspection and maintenance must be kept and maintained for OCD review." OCD is denying this request because the proposed replacement language of 19.15.36.15.E(4) NMAC of "The operator shall maintain a copy of the monitoring reports in a form readily accessible for division inspection" specifically addresses vadose zone monitoring records when Condition 3 pertains to the records of landfarm inspection and maintenance required to document the compliance to the actions required of Condition 16 of the permit, under the heading Landfarm Operation.

- Request 9: In accordance with Condition 2 of the permit, under the heading Reporting, "Environmental Plus, Inc. must notify the OCD Santa Fe and Hobbs offices within 24 hours of any fire, break, leak, spill, blowout or any other circumstance that could constitute a hazard or contamination in accordance with OCD Rule 116." Rule 116 was replaced by 19.15.29 NMAC (Part 29). The requirements of 19.15.29 NMAC consider other scenarios for which notice is required and specifies different types of notices depending on if it is a major or minor release. The notice requirement of 19.15.36.15.E(5) NMAC is only applicable when an unauthorized release is detected through the routine semi-annual vadose zone monitoring, specifically for a surface waste management facility landfarm. It does not consider the timeframes and methods for notice required of Part 29. OCD is denying this request because the notice requirements of Part 29 are different than the notice required of 19.15.36.15.E(5) NMAC.

- Request 11: Pursuant to 19.15.36.15.E(2) NMAC, "The operator shall collect and analyze a minimum of four randomly selected, independent samples from the vadose zone at least semi-annually using the methods specified below for *TPH, BTEX and chlorides* and shall compare each result to the higher of the PQL or the background soil concentrations to determine whether a release has occurred." In accordance with 19.15.36.15.F(2) NMAC, "Total *BTEX*, as determined by EPA SW-846 method 8021B or 8260B, shall not exceed 50 mg/kg." OCD is denying this request because the "background soil concentrations" in 19.15.36.15.E(2) NMAC only apply to TPH, BTEX and chlorides in which EPI clarifies that in the same request that "a background sampling plan will be submitted for OCD's approval to establish the specific Rule 36 regulatory thresholds for GRO, DRO, TPH, BTEX and Chloride and will use the EPA ProUCL 5.1 program to support the facility background statistical demonstration." OCD is also denying the request because a change to a numerical standard provided in 19.15.36 NMAC, such as Total BTEX for 19.15.36.15.F(2) NMAC, is a major modification pursuant to 19.15.36.7.B(9) NMAC and cannot be considered in a minor modification request.

- Request 15: OCD is denying the request to exclude the following toxic pollutants, listed in 20.6.2.7.T(2) NMAC from the facility background demonstration required of 19.15.36.15.B NMAC, since the analytes are considered associated with oil field waste:
    - Chloroalkyl ethers (20.6.2.7.T(2)(f) NMAC): Used as a microbicide and corrosion inhibitor in the petroleum industry;
    - Nitrosamines (20.6.2.7.T(2)(q) NMAC): Used in the synthesis of some cationic surfactants. Cationic surfactants have been proven to be highly effective in improving oil recovery in carbonate reservoirs with low surfactant loss due to adsorption;
    - Perchlorate (20.6.2.7.T(2)(r) NMAC): Used in High Energy Gas Fracturing for stimulating wells with propellant gas generators. Developed as a high energy exothermic fracturing method using a 4-5 special blend of ammonium perchlorate to create a high energy pressure fracture;
    - Perfluorinated-chemicals (20.6.2.7.T(2)(s) NMAC): Used in hydraulic fracturing or other chemicals can degrade into polyfluoroalkyl substances (PFAS) in fracking; and
    - Thiolane 1,1 dioxide (sulfolane) (20.6.2.7.T(2)(y) NMAC): Sulfolane is a component of a solvent solution used to remove carbon dioxide (CO2), hydrogen sulfide (H2S), carbonyl sulfide (COS), and organic sulphides from natural gas.

- Request 18: Pursuant to Transitional Provision 19.15.36.20.A NMAC, "Existing surface waste management facilities shall comply with the financial assurance, operational, monitoring, waste acceptance and closure and post closure requirements provided in 19.15.36 NMAC, *except as otherwise specifically provided in the applicable permit or order, or in a specific waiver, exception, or agreement that the division has granted in writing to the particular surface waste management facility*." The highlighted language means that Condition 2e of the permit, under the heading Closure, supersedes the closure requirement of 19.15.36.18.C(4)(f) NMAC in regard to existing structures and fences, but not the removal of equipment and roads, the site clean-up, and the conducting of tests on soils for contamination. Therefore, a minor modification request is not warranted to address existing structures and fences. OCD also wishes to inform EPI that the highlighted language of 19.15.36.20.A NMAC above and Condition 2e of the permit, under the heading Closure, also addresses the berm removal requirement of 19.15.36.18.C(4)(e) NMAC. Therefore, a minor modification request is not warranted to address existing berms.

- Request 19: See OCD's response to Request 18 above.

OCD hereby grants EPI approval of the following minor modification requests to permit NM1-013, and the exception requests regarding compliance to the transitional provisions of 19.15.36.20 NMAC with the following conditions:

1. EPI shall comply with all applicable requirements of the Oil and Gas Act (Chapter 70, Article 2 NMSA 1978), the existing permit NM1-013 as modified, the transitional provisions of 19.15.36.20 NMAC, and all conditions specified in this approval;

2. EPI shall cease the biweekly tilling in landfarm cells that the semi-annual treatment zone monitoring results of 19.15.36.15.D NMAC demonstrate that TPH does not exceed 2500 mg/kg and that the chloride concentration does not exceed 500 mg/kg if the landfarm is located where ground water is less than 100 feet but at least 50 feet below the lowest elevation at which the operator will place oil field waste;

3. Treatment zone sampling and monitoring for an additional lift shall be performed in accordance with 19.15.36.15.D NMAC in lieu of the NM1-013 permit requirements;

4. Analysis of total petroleum hydrocarbons (TPH) shall be represented as the sum of GRO, DRO and MRO (hydrocarbon chain range from C_6 through C_{36}) by EPA Method 8015M or 8015M Extended, in lieu of TPH by EPA Method 418.1, to establish background and to conduct all future vadose zone and treatment zone monitoring;

5. EPI shall utilize Standard Method SM4500Cl-B, in addition to EPA Method 300.1, for chloride to establish background and to conduct all future vadose zone and treatment zone monitoring;

6. EPI shall take the vadose zone samples from soils between three and four feet below the cell's original ground surface beneath the treatment zone in each landfarm cell;

7. Vadose zone sampling and monitoring shall be performed in accordance with 19.15.36.15.E NMAC in lieu of the NM1-013 permit requirements;

8. EPI shall backfill sample excavations and boreholes with the excavated soils rather than with an impermeable material such as cement or bentonite;

9. EPI shall utilize the most conservative (lowest) exposure limits of either the Risked-based SSL DAF 1 or the NMGW/MCL based SSL DAF 1 values listed in Table A-3, Summary of Soil-to-Groundwater Screening Levels, from the June 2022 NMED Risk Assessment Guidance for Site Investigations and Remediation, Volume I, Soil Screening Guidance for Human Health Risk Assessments for each constituent listed in Subsections A and B of 20.6.2.3103 NMAC (except for GRO, DRO, TPH, BTEX and Chloride) to assist in the recalculation of the groundwater exposure pathway for each constituent. OCD wishes to clarify that the application of a risked based approach to change a numerical standard specified for Benzene, BTEX, GRO, DRO, TPH, and/or Chlorides, as recognized in Paragraphs (1-4) of 19.15.36.15.F NMAC, is a major modification pursuant to 19.15.36.7.B(9) NMAC and cannot be considered in a minor modification request;

10. EPI shall utilize a dilution attenuation factor (DAF) of 2.2 to recalculate the *groundwater exposure pathway threshold values* and establish acceptable SSL performance threshold concentrations for the constituents listed in Subsections A and B of 20.6.2.3103 NMAC (except for GRO, DRO, TPH, BTEX and Chloride) rather than establish background for the constituents pursuant to 19.15.36.15.B NMAC. EPI shall compare the recalculated groundwater exposure pathway threshold values to the other applicable exposure pathway threshold values provided in Table A-1, NMED Soil Screening Levels, from the June 2022 NMED Risk Assessment Guidance for Site Investigations and Remediation, Volume I, Soil Screening Guidance for Human Health Risk Assessments, to determine which of the most stringent exposure pathway threshold values should be applied for each constituent;

11. EPI shall combine certain landfarm cells, as proposed in the minor modification request, to the appropriate sampling size for a DAF of 2.2 for all future treatment zone and vadose zone monitoring. The combining of certain landfarm cells will result in landfarm cells being larger than five (5) acres but less than 10 acres as required of 19.15.36.7.B(6) NMAC. EPI must submit vadose zone and treatment zone sampling protocols to address the future semi-annual treatment zone sampling of 19.15.36.15.D NMAC, the semi-annual vadose sampling of 19.15.36.15.E NMAC, and the treatment zone closure sampling of 19.15.36.15.F NMAC to

demonstrate that representative samples are obtained and assessed from the combined landfarm cells;

12. EPI shall exclude the following toxic pollutants, listed in 20.6.2.7.T(2) NMAC from the facility background demonstration required of 19.15.36.15.B NMAC, since the analytes are not considered associated with oil field waste:
    a. nitroaromatics and high explosives (20.6.2.7.T(2)(p)(i)-(viii) NMAC);
    b. Endosulfan (20.6.2.7.T(2)(t)(vi) NMAC); and
    c. Prometon (20.6.2.7.T(2)(t)(xi) NMAC).

13. Mercury shall be analyzed by EPA Method 7471A, in lieu of EPA Methods 6010B or 6020, to establish background and to conduct all future vadose zone and treatment zone monitoring;

14. If EPI achieves the closure performance standards specified in 19.15.36.15.F NMAC, then EPI may either leave the treated soils and cell berms constructed of treated soils in place, *or, with prior division approval, reuse the treated soils in an alternative manner*. EPI shall include closure protocols for the sampling of the berms constructed of treatment zone soils for closure performance standards in 19.15.36.15.F NMAC in the closure and post-closure plan;

15. EPI may leave the existing roads in place after closure to accommodate to access and monitor the property after closure and post-closure; and

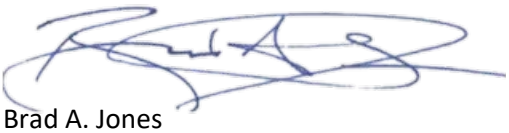
16. EPI shall submit a facility background sampling and analysis plan, within 30 days of receipt of this letter, to OCD for review and consideration of approval for the following constituents: GRO, DRO, MRO, BTEX, Chlorides, Combined Radium-266 and Radium-228, pH, and Sulfate.

17. EPI shall obtain written approval from OCD prior to implementing any changes to this approval.

Please be advised that approval of this request does not relieve EPI of liability should operations result in pollution of surface water, ground water or the environment. Nor does approval relieve EPI of its responsibility to comply with any other applicable governmental authority's rules and regulations.

If there are any questions regarding this matter, please do not hesitate to email me at brad.a.jones@emnrd.nm.gov.

Respectfully,



Brad A. Jones
Environmental Specialist

cc: Pat McCasland, mccasland_67@msn.com

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CONDITIONS

Action 144669

CONDITIONS

Operator: ENVIRONMENTAL PLUS INC PO Box 1748 EUNICE, NM 88231	OGRID: 195265
	Action Number: 144669
	Action Type: [C-137] SWMF Minor Modification (C-137A)

CONDITIONS

Created By	Condition	Condition Date
bjones	OCD emailed the minor modification and exception requests approval for Permit NM1-13 to Sherry Miller (Environmental Plus Inc) and Pat McCasland on November 10, 2022. OCD's approval is attached to the end of the request as OCD's Response. If you have any questions regarding this matter, please do not hesitate to contact me.	11/10/2022