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VIA EMAIL

April 4, 2025

Kevin O'Hara Site Coordinator Division of Environmental Response and Revitalization Ohio Environmental Protection Agency Southeast District Office 2195 Front Street Logan, Ohio 43138

RE: Former Satralloy Site Revised Supplement to Amendment No. 10 to the IA Work Plan Related to NAPL along a Buried Pipe

Dear Kevin,

Cyprus Amax Minerals Company (Cyprus) would like to amend the Interim Action Workplan (IA Work Plan) in accordance with the Consent Order for Preliminary Injunction (COPI) Section VII (Additional Work) and Section XII (Review of Submittals): "All work plans, reports, or other items required to be submitted to Ohio EPA under this COPI, including any approved additional Work, shall, upon approval by Ohio EPA, be deemed to be incorporated in and made an enforceable part of this COPI." COPI, Section XII, paragraph 32. Based on a phone conference with you on April 2, 2025, this letter has been revised from the previous letter submitted on February 11, 2025.

1. Overview

A previously unknown non-aqueous phase liquid (NAPL) was encountered at the Former Satralloy Site (the Site) during slag removal. The overall scope of the interim actions under this supplement to Amendment No. 10 of the IA Work Plan is to remove soils impacted by this NAPL and place them in the consolidated stockpile in the Former Mine Area of the Site in accordance with the IA Work Plan and the Director's Final Findings and Order (the 02(G) Orders) issued on April 19, 2024. This amendment also provides a sampling and analysis plan to confirm that impacted soils have been removed. During Interim Action slag removal within sampling grid 21-16 (Figure 1), NAPL was observed accumulating in a shallow tire track on October 9, 2024. Work in the immediate vicinity of this accumulation was suspended, and an earthen berm was constructed around the observed NAPL. Subsequently, a bulldozer performing slag excavation near the berm unearthed a previously unknown 30-inch diameter corrugated metal pipe, along with evidence of further NAPL. An additional berm was constructed to contain the liquid observed around the exposed pipe.

Samples of the NAPL were collected on October 11 and November 7, 2024. Laboratory analysis included chlorinated herbicides, organochlorine pesticides, polycyclic aromatic hydrocarbons (PAH), polychlorinated biphenyls (PCBs), and VOCs. Low concentrations of total pesticides, PCB Aroclor 1260, two PAH, and seven VOC compounds were detected or had estimated concentrations (Table 1).

Three soil samples were collected October 31, 2024, to screen for potential soil impacts. Soil samples PT-1 through PT-4 (Figure 1) were collected from soil beneath the pipe where NAPL had been present from areas ranging from low visual impact (PT-1) to greater visual impact (PT-4). Thus, sample PT-4 represents "worst case" impacted soil. Visual impacts at location PT-3 were similar to PT-2, therefore PT-

Mr. Kevin O'Hara April 4, 2025 Page 2

3 was not analyzed. The samples were analyzed for PCBs and SVOCs. Results are presented in Table 2. These values (including detection limits for non-detected compounds) were compared to 20 times the Toxicity Characteristics Leaching Procedure (TCLP) limits ("20x rule"), which indicates that the soil would not be considered hazardous waste.

Additional excavation was performed around the pipe, with NAPL visually identified in the backfill around the pipe for approximately 150 linear feet. Excavated materials have been placed within the bermed area. Both NAPL and stormwater collected in the bermed areas and the excavations around the pipe. On December 17 and 18, 2024, approximately 3,500 gallons of this liquid were pumped to a frac tank for temporary on-site storage. The NAPL was disposed of off-site as non-hazardous at a permitted facility.

The section of pipe (i.e., 150 linear feet), associated backfill, and some immediately adjacent native clayey soil (including any soil visually impacted by NAPL) will be placed into the consolidated stockpile located in the Former Mine Area of the Site. No free-phase NAPL will be placed in the consolidated stockpile. The location of the materials placed in the consolidated stockpile will be documented.

2. Regulatory Applicability

As to PCB Aroclor 1260, the concentrations detected were below 50 ppm and the historical use of the Site suggests that the presence of PCBs resulted from activities conducted at the Site prior to April 18, 1978. The disposal provisions in Subpart D of Toxic Substances Control Act (TSCA) clarify that "Excluded PCB products" is defined as "PCB materials which appear at concentrations less than 50 ppm." 40 CFR § 761.3.¹ As clarified in U.S. EPA's June 2014 PCB Q&A Manual, "[t]he PCB disposal rules do not apply to waste that is currently <50 ppm that was disposed of, spilled, or otherwise released into the environment prior to April 18, 1978." *See* Manual at p. 47, Question 5. Moreover, as noted by the context of that question, if a party encounters PCBs in soils at concentrations <50 ppm from a pre-1978 release, that party may "move soil freely on-site" and/or "use as fill" without violating any provision of TSCA. *Id.*

In light of the foregoing, the placement of the PCB-impacted soils within the consolidation stockpile in the Former Mine Area of the Site is not subject to regulation under TSCA. Moreover, the placement of the PCB-impacted soils in the slag consolidation area is consistent with the Area of Contamination Policy authorization and the 02(G) Orders that were issued by the agency, and is an otherwise appropriate disposition of those materials.

3. Soil Removal Confirmation Sampling and Analysis

Confirmatory samples will be collected to confirm removal of NAPL-impacted soils. Soil samples will be collected and selected for laboratory analysis as described below. The procedures will be consistent with the project Quality Assurance Project Plan (QAPP) and Field Sampling Procedures (RI/FS Workplan Appendix H) previously approved by Ohio EPA.

Sample Collection

The final excavation is expected to include approximately 150 linear feet of potentially impacted soil, beginning at the upgradient point where no NAPL impacts were observed. The depth and width of the excavation will be determined in the field based on visual observations and may vary. The length of the excavation will be divided into three sections approximately 50 feet long. From each section, grab samples will be collected from each sidewall and also from the excavation floor. If its width exceeds 10 feet between the sidewalls, additional floor samples will be collected for every 10 feet of excavation width. The downgradient section of the excavation terminates at a drainage swale, thus there is no end sidewall.

¹ According to those same provisions, only "spills and other uncontrolled discharges of PCBs at concentrations of \geq 50 ppm constitute the disposal of PCBs." 40 CFR § 761.50(a)(4).

Mr. Kevin O'Hara April 4, 2025 Page 3

In that area, a sample will be collected from the ground surface of the swale immediately downgradient from the outlet area of the former stormwater pipe. The locations of the grab samples in each section will be biased to areas where the greatest visual impacts were previously observed. Each grab sample will be submitted for laboratory analysis. See below for a schematic example of sample locations.



Sampling Procedures

Sample ID's will be identified as PT-SX, where "S" is the section letter and "X" is the grab sample number. One field duplicate will be collected for confirmation samples. Grab samples will be collected using a precleaned trowel.

Soil will be placed directly into labeled glassware as follows:

- VOCs 2 oz jar
- Herbicides 4 oz jar
- PCB/PAH/Pesticides 8 oz jar

These samples will be placed in a cooler with ice and delivered to the laboratory under chain-of-custody procedures. After receipt of analytical results, samples remaining onsite (screening and unselected samples) will be placed in the consolidated stockpile.

Laboratory Analysis

Eurofins Laboratories has been contracted to perform laboratory analyses for the following:

• PCB Aroclors by EPA test method SW-8082A

Mr. Kevin O'Hara April 4, 2025 Page 4

- VOCs by EPA test method SW-8260D
- PAH compounds by EPA test method SW-8270E
- Chlorinated Herbicides by EPA test method SW-8151
- Organochlorine Pesticides by EPA test method SW-3580A

The shortest sample holding time is 14 days.

The confirmation samples will be acceptable if the laboratory analytical results are less than the numeric values for composite worker screening levels published in the November 2024 USEPA Regional Screen Levels (RSL) Table for target cancer risk (TR) 1E-06 times a factor of 10, and target hazard quotient of 1.0. These TR values are consistent with the Ohio EPA target cancer risk of 1E-05. For example, the composite worker RSL for Aroclor 1260 is 9.9E-01 mg/kg based on a TR of 1E-06. The adjusted RSL will be 9.9 mg/kg.

4. Closing

For the foregoing reasons, Cyprus respectfully requests Ohio EPA's approval of this revised supplement to Amendment No. 10 to the IA Work Plan for the Site. If you have questions, please do not hesitate to contact me directly.

Sincerely,

Barbara K. Nielsen Manager, Remediation Projects

Attachments:

Tables 1-2, NAPL and Soil Screening Analytical Results 1 Figure 1, NAPL Soil Sample and Analysis Plan

Table 1 - NAPL Sample Analytical Results

Total Concentrations Reported in mg/kg

Parameter	SAT-WC101124** 10/11/2024	Parameter	SAT-WC101124A** 10/11/2024		
Chlorinated Herbicides		Volatile Organic Compounds			
2,4,5-T	< 1.1	1,1,1-Trichloroethane	< 0.023		
2,4-D	< 5.9	1,1,2,2-Tetrachloroethane	< 0.0098		
Silvex < 1.1 *1		1,1,2-Trichloroethane	< 0.013		
Organochlorine Pesticides		1,1-Dichloroethane	< 0.019		
4,4-DDD	< 0.006	1,1-Dichloroethene	< 0.02		
4,4-DDE	< 0.0038	1,2,4-Trichlorobenzene	5.4		
4,4-DDT	2.4 F1	1,2-Dibromo-3-chloropropane	< 0.055		
Aldrin	< 0.012	1,2-Dibromoethane	< 0.011		
alpha-BHC	< 0.007	1,2-Dichlorobenzene	< 0.0095		
alpha-Chlordane (cis-chlordane)	< 0.009	1,2-Dichloroethane	< 0.011		
alpha-Endosulfan	< 0.005	1,2-Dichloropropane	< 0.009		
beta-BHC	< 0.011	1,3-Dichlorobenzene	< 0.0053		
beta-Endosulfan	< 0.0079	1,4-Dichlorobenzene	< 0.0088		
delta-BHC	< 0.012	2-Butanone	0.19 JB		
Dieldrin	0.27 Jp	2-Hexanone	< 0.022		
Endosulfan Sulfate	< 0.0084	4-Methyl-2-pentanone	0.32 J		
Endrin	< 0.0048	Acetone	< 0.19		
Endrin Aldehyde	< 0.0096	Benzene	< 0.013		
Endrin Ketone	< 0.0061 F1	Bromodichloromethane	< 0.011		
gamma-BHC	< 0.0071	Bromoform	< 0.021		
Heptachlor	< 0.011	Bromomethane	0.17 JB		
Heptachlor Epoxide	< 0.0077	Carbon Disulfide	< 0.013		
Methoxychlor	< 0.014 F2	Carbon Tetrachloride	< 0.007		
Toxaphene	< 0.18	Chlorobenzene	< 0.007		
trans-Chlordane	< 0.004	Chloroethane	< 0.067		
	SAT-WC101124A**	Chloroform	< 0.0097		
Polycyclic Aromatic Hydrocarbons	10/11/2024	Chloromethane	< 0.015		
Acenaphthene	< 1.4 F1	cis-1,2-Dichloroethene	< 0.0076		
Acenaphthylene	28 J	cis-1,3-Dichloropropene	< 0.0087		
Anthracene	< 3.5 F1	Cyclohexane	< 0.044		
Benzo[a]anthracene	< 2.1	Dibromochloromethane	< 0.013		
Benzo[a]pyrene	< 3.5	Dichlorodifluoromethane	< 0.018		
Benzo[b]fluoranthene	< 3.5	Ethylbenzene	0.14 J		
Benzo[g,h,i]perylene	< 2.7	Freon 113	< 0.043		
Benzo[k]fluoranthene	< 3.5	Isopropylbenzene	< 0.0071		
Chrysene	< 1.5	Methyl Acetate	0.28 J		
Dibenz[a,h]anthracene	< 2.3	Methyl Cyclohexane	< 0.013		
Fluoranthene	< 1.4	Methyl tert-Butyl Ether	< 0.0078		
Fluorene	< 2F1	Methylene Chloride	0.25 JB		
Indeno[1,2,3-cd]pyrene	< 3	Styrene	< 0.0062		
Naphthalene	< 1.3	Tetrachloroethene	< 0.013		
Phenanthrene	< 1.7 F1	Toluene	< 0.019		
Pyrene	18 J	trans-1,2-Dichloroethene	< 0.01		
	SAT-WC110724**	trans-1,3-Dichloropropene	< 0.022		
Polychlorinated Bisphenols	11/7/2024	Trichloroethene	< 0.011		
Aroclor 1016	< 0.16	Trichlorofluoromethane	< 0.018		
Aroclor 1221	< 0.18	Vinyl Chloride	< 0.02		
Aroclor 1232	< 0.12	Xylenes, Total	0.81 J		
Aroclor 1242	< 0.073				
Aroclor 1248	< 0.12				
Aroclor 1254	< 0.15]			
Aroclor 1260	31				

Notes:

J = Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

B = Compound was found in the blank and sample.

F1 = MS and/or MSD recovery exceeds control limits (sample required dilution).

F2 = MS/MSD RPD exceeds control limits (sample required dilution).

*1 = LCS/LCSD RPD exceeds control limits (sample required dilution).

p = The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.
** = All samples collected from the same NAPL in-situ. Additional sample volume required for PCB analysis collected from same NAPL source.

Table 2 - Soil Sample Analytical Results

Parameter	SAT-PT-01 10/31/2024 mg/kg	SAT-PT-02 10/31/2024 mg/kg	SAT-PT-04 10/31/2024 mg/kg	All PT Soils Max Value mg/kg	TCLP 20x PPM	TCLP HW Limit* mg/L			
Semivolatile Organic Compounds									
1,4-Dichlorobenzene	< 0.029	< 0.62	< 1.3	< 1.3	150	7.5			
2,4,5-Irichlorophenol	< 0.039	< 0.81	< 1.8	< 1.8	8000	400			
2,4,6-Trichlorophenol	< 0.034	< 0.71	< 1.5	< 1.5	40	2			
2.4-Dimethylphenol	< 0.042	< 0.89	< 1.9	< 1.9					
2.4-Dinitrophenol	< 0.2	< 4.2	< 9.1	< 9.1					
2,4-Dinitrotoluene	< 0.027	< 0.57	< 1.2	< 1.2	2.6	0.13			
2,6-Dinitrotoluene	< 0.042	< 0.89	< 1.9	< 1.9					
2-Chloronaphthalene	< 0.033	< 0.69	< 1.5	< 1.5					
2-Chlorophenol	< 0.031	< 0.64	< 1.4	< 1.4					
2-Methylnaphthalene	0.19	< 0.32	< 0.69	< 0.69					
2-Methylphenol	< 0.048	< 1	< 2.2	< 2.2	4000	200			
2-Nitroaniline	< 0.045	< 0.94	< 2	< 2					
2-Mitrophenol 3 4 Mothylphonol (total)	< 0.041	< 0.80	< 1.9	< 1.9	4000	200			
3 3'-Dichlorobenzidine	< 0.048	<23	< 5	< 5	4000	200			
3-Nitroaniline	< 0.041	< 0.86	<1.9	<19					
4.6-Dinitro-2-methylphenol	< 0.12	< 2.6	< 5.5	< 5.5					
4-Bromophenyl Phenyl Ether	< 0.038	< 0.79	< 1.7	< 1.7					
4-Chloro-3-methylphenol	< 0.045	< 0.94	< 2	< 2					
4-Chloroaniline	< 0.019	< 0.39	< 0.85	< 0.85					
4-Chlorophenyl-phenylether	< 0.033	< 0.69	< 1.5	< 1.5					
4-Nitroaniline	< 0.031	< 0.64	< 1.4	< 1.4					
4-Nitrophenol	< 0.11	< 2.2	< 4.8	< 4.8					
Acenaphthene	< 0.016	< 0.34	< 0.74	< 0.74					
Acenaphthylene	< 0.018	< 0.37	1.2 J	1.2 J					
Acetophenone	< 0.029	< 0.62	< 1.3	< 1.3					
Anthracene	< 0.014	< 0.3	< 0.64	< 0.64					
Atrazine	< 0.081	< 1.7	< 3.7	< 3.7					
Benzaldenyde	< 0.066	< 1.4	< 3	< 3					
Benzolajantinacene	0.016 J	< 0.37	< 0.74	< 0.0					
Benzo[b]fluoranthene	0.010 J	< 0.34	< 0.74	< 0.74					
Benzolg h ilpervlene	< 0.032	< 0.5	< 1.4	< 1.4					
Benzo[k]fluoranthene	< 0.012	< 0.25	< 0.53	< 0.53					
Biphenyl	< 0.033	< 0.69	< 1.5	< 1.5					
Bis(2-chloro-1-methylethyl) Ether	< 0.031	< 0.64	< 1.4	< 1.4					
Bis(2-chloroethoxy)methane	< 0.024	< 0.49	< 1.1	< 1.1					
Bis(2-chloroethyl) Ether	< 0.026	< 0.54	< 1.2	< 1.2					
Bis(2-ethylhexyl) Phthalate	< 0.066	< 1.4	< 3	< 3					
Butylbenzyl Phthalate	< 0.06	< 1.3	< 2.7	< 2.7					
Caprolactam	< 0.081	< 1.7	< 3.7	< 3.7					
Carbazole	< 0.032	< 0.67	< 1.4	< 1.4					
Chrysene	0.021 J	< 0.34	< 0.74	< 0.74					
Dibenz[a,h]anthracene	< 0.018	< 0.37	< 0.8	< 0.8					
Dipenzoluran Disthul Dhthelata	0.051 J	< 0.71	< 1.5	< 1.5					
Directly/ Philalate	< 0.031	< 0.00	< 2.3	< 2.3					
Di-n-Butyl Phthalate	< 0.047	< 1.3	< 2.1	< 2.1					
Di-n-octyl Phthalate	0.068 J	< 1.2	< 2.7	< 2.7					
Fluoranthene	0.039 J	< 0.34	< 0.74	< 0.74					
Fluorene	< 0.016	< 0.34	< 0.74	< 0.74					
Hexachlorobenzene	< 0.016	< 0.34	< 0.74	< 0.74	2.6	0.13			
Hexachlorobutadiene	< 0.025	< 0.52	< 1.1	< 1.1	10	0.5			
Hexachlorocyclopentadiene	< 0.046	< 0.96	< 2.1	< 2.1					
Hexachloroethane	< 0.038	< 0.79	< 1.7	< 1.7	60	3			
Indeno[1,2,3-cd]pyrene	< 0.014	< 0.3	< 0.64	< 0.64					
Isophorone	< 0.031	< 0.64	< 1.4	< 1.4					
Naphthalene	0.15	< 0.32	< 0.69	< 0.69	10				
Nitropenzene	< 0.026	< 0.54	< 1.2	< 1.2	40	2			
N Nitrosodinbonylamino	< 0.044	< 0.91	<14	<14					
Pentachlorophenol	< 0.032	< 2.6	< 5.6	< 5.6	2000	100			
Phenanthrene	0.12	0.48.1	< 0.69	< 0.69	2000	100			
Phenol	< 0.045	< 0.94	< 2	< 2					
Pvrene	0.035 J	< 0.39	1.1	1 J					
Pyridine	< 0.062	< 1.3	< 2.8	< 2.8	100	5			
Polychlorinated Biphenyls									
Aroclor 1016	< 0.031	< 0.03	< 0.031	< 0.027					
Aroclor 1221	< 0.037	< 0.036	< 0.037	< 0.032					
Aroclor 1232	< 0.026	< 0.025	< 0.026	< 0.022					
Aroclor 1242	< 0.023	< 0.023	< 0.023	< 0.02					
Aroclor 1248	< 0.021	< 0.02	< 0.021	< 0.018					
Aroclor 1254	< 0.026	< 0.025	< 0.026	< 0.022					
Arociof 1260	1.4	< 0.025	0.16	1.4					

Notes:

J = Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
* = TCLP Limits from 40 CFR 261.24 Table 1.

