



ADDENDUM TO THE CONTRACT

for the

PROJECT PLAYGROUND CLEANUP Contract No. MR BE17-266

ADDENDUM NO.: ONE

CURRENT DEADLINE FOR BIDS:
JUNE 1, 2017

PREVIOUS ADDENDA: NONE

ISSUED BY: City and Borough of Juneau
ENGINEERING DEPARTMENT
155 South Seward Street
Juneau, Alaska 99801

DATE ADDENDUM ISSUED: May 22, 2017

The following items of the contract are modified as herein indicated. All other items remain the same. This addendum has been issued and is posted online. Please refer to the CBJ Engineering Contracts Division webpage at: <http://www.juneau.org/engineering ftp/contracts/Contracts.php>

PROJECT MANUAL:

Item No.: 1 SECTION 00800 – SUPPLEMENTARY GENERAL CONDITIONS, SGC 4.2 – PHYSICAL CONDITIONS – SUBSURFACE AND EXISTING STRUCTURES, Article C.1.b. **Add** the attached reports at the end of Supplementary General Conditions.

By: 
Greg Smith,
Contract Administrator

Total number of pages contained within this Addendum: 6

AIR SAMPLING LOCATIONS AND RESULTS OF 4-25-17 DISPOSAL VOLUME ESTIMATES

Cox Environmental Services and Dahlberg Design conducted real-time monitoring for particulates (PM_{2.5} and PM₁₀) and volatile organic compounds (VOCs) using portable handheld devices and collected three air samples (plus one field duplicate) for VOCs laboratory analysis on April 25, 2017. The sampling was limited in nature and should not be construed as an exhaustive study of the potential impacts from exposure from chemicals released to the air from the fire. Certainly concentrations would be expected to have been higher while the fire was actually burning. Likewise, because the air sampling was to be conducted as soon as possible after the fire was extinguished, the list of chemicals analyzed in the sampling event was limited by the equipment and supplies readily available at the time of the sampling.

Particulates can be classified as either respirable (less than 5 microns in diameter) or non-respirable. Respirable particles can penetrate into the lower lung and can cause damage. Non-respirable particles are trapped in the upper respiratory system and can cause irritation. The USEPA National Ambient Air Quality Standard (NAAQS) recommends that particulates 2.5 micrometers to 10 micrometers in diameter (PM₁₀) be maintained at less than 150 micrograms of particulates per cubic meter of air ($\mu\text{g}/\text{m}^3$). The real-time monitoring indicates particulates are present at acceptable levels protective of public health (all measurements adjacent to the playground, by the parking lot, and along the bike path were below $3 \mu\text{g}/\text{m}^3$).

Real-time monitoring for VOCs was conducted using a hand-held Mini-Rae 3000 PID. The real-time monitoring detected low levels of VOCs in the area of the fire. To further quantify potential exposure to VOCs, grab VOC air samples were collected using 3-liter tedlar bags. The VOC air samples were analyzed by ALS Environmental using United States Environmental Protection Agency (USEPA) Method TO-15. The VOC air results are summarized in Table 1 and the locations are shown on the attached playground plan drawing. The results indicate detected concentrations of two VOCs, 1,3-butadiene and benzene, are above Agency for Toxic Substance and Disease Registry (ASTDR) Inhalation Minimal Risk Levels for Acute and/or Chronic Exposure. 1,3-butadiene was detected at a concentration of 8.9 (8.3 duplicate) $\mu\text{g}/\text{m}^3$ which is below the ASTDR acute level of $200 \mu\text{g}/\text{m}^3$ but exceeds the ASTDR chronic level of $0.03 \mu\text{g}/\text{m}^3$. Benzene was detected at a concentration of 40 (31 duplicate) $\mu\text{g}/\text{m}^3$ which exceeds the ASTDR acute level of $30 \mu\text{g}/\text{m}^3$ and exceeds the ASTDR chronic level of $10 \mu\text{g}/\text{m}^3$. 1,3-butadiene is a chemical used as a monomer in the production of synthetic rubber and benzene is a known byproduct of the incomplete combustion of many materials.

Based on the results of the air sampling, it is our recommendation that the police tape barrier remain in place and the public continue to limit visiting the site for prolonged periods of time to reduce the potential for exposure. Additionally, based on the air sampling it is our recommendation that workers involved in the removal of the burned materials have OSHA HAZWopper Training and wear the appropriate level of personal protective equipment (PPE) during the removal work.

As mentioned in our previous e-mail, disposal of the burned structural materials (including tires and tire mulch) is allowable within the permit for the landfill, is within regulatory compliance

from ADEC, and is also material that Capital Disposal is willing to accept. Some of the materials will likely be disposed of in the construction & demolition area while some will be disposed of in the general landfill. Once the majority of burned structural materials are removed, soil mixed with burned material should be stockpiled and sampled to demonstrate that it meets the regulatory standards under RCRA for potential leaching of contaminants prior to disposal at the landfill. If the soil is within regulatory standards, it can be also be accepted by the landfill and used as cover. If the soil does not meet regulatory standards it will need to be containerized and shipped to Roosevelt Landfill in Washington for disposal. Based on the results of the soil mixture sampling results confirmation sampling of the soils remaining within the property may be prudent to ensure potential contaminant impacts have been addressed.

A ballpark estimate (attached) of the volume of materials to be disposed of in order to demolish the wreckage from the playground fire was put together. For practical purposes, estimates were put together as number of 10-cubic-yard dump truck loads, and materials were categorized as damaged structural materials, rubber mat surfacing, and shredded rubber/soil fill. Estimated volumes are

- Damaged structural materials: 37-40 loads (not including concrete sidewalk area outside the playground fence)
- Rubber mat surfacing: 10-12 truck loads (about 3,000 square feet, may have to be cut into pieces to fit in trucks)
- Rubber/soil fill: approx 100 covered loads, depending on expansion of materials once removed from the ground
- Total volume of materials is approximately 150 10 CY loads.

Regards,

Jolene and Sigrid

J o l e n e C o x

COX ENVIRONMENTAL SERVICES
712 W 12th Street Juneau, AK 99801
[907-586-4447](tel:907-586-4447) Office
[907-723-9946](tel:907-723-9946) Cell
jcox@coxenv.com
www.coxenv.com

Air Sampling Results: Project Playground April 25, 2017 – Juneau, Alaska

Compound	CAS Number	Units	ATSDR	ATSDR	PPAS-1-4-25-17			
			Inhalation Minimal Risk Levels (Acute)	Inhalation Minimal Risk Levels (Chronic)	(Duplicate of PPAS-1-4-25-17)			
Dichlorodifluoromethane	75-71-8	µg/m ³	NA	NA	[2.0]	[2.0]	[1.8]	<0.74
Chloromethane	74-87-3	µg/m ³	NA	NA	[0.72]	[0.68]	[0.85]	<0.31
1,3-Butadiene	106-99-0	µg/m ³	200	0.03	8.9	8.3	<0.33	<0.33
Freon 11	75-69-4	µg/m ³	NA	NA	[0.87]	[0.92]	[0.90]	[0.97]
Acetone	67-64-1	µg/m ³	60000	30000	24	34	35	25
Methylene chloride	75-09-2	µg/m ³	2000	1000	15	26	29	14
2-Butanone	78-93-3	µg/m ³	NA	NA	4.3	6.6	6.3	3.8
Ethyl acetate	141-78-6	µg/m ³	NA	NA	4.2	7.4	7.9	3.9
Hexane	110-54-3	µg/m ³	2000	NA	1.9	2.4	[1.6]	[0.68]
Benzene	71-43-2	µg/m ³	30	10	40	31	[1.3]	[0.70]
Cyclohexane	110-82-7	µg/m ³	NA	NA	[0.98]	[1.4]	[1.2]	<0.52
Heptane	142-82-5	µg/m ³	NA	NA	3.5	6.1	5.5	[1.8]
4-Methyl-2-pentanone	108-10-1	µg/m ³	NA	NA	[1.9]	5	<0.61	<0.61
Toluene	108-88-3	µg/m ³	4000	300	98	150	120	63
Ethyl benzene	100-41-4	µg/m ³	40000	1000	4.8	5.8	2.4	[1.2]
m,p-Xylene	179601-23-1	µg/m ³	9000	200	12	12	6.3	4.6
o-Xylene	95-47-6	µg/m ³	9000	200	3.2	3	[1.8]	[1.4]
Styrene	100-42-5	µg/m ³	9000	900	6.2	4.2	[1.3]	[1.4]
Tetrahydrofuran	109-99-9	µg/m ³	NA	NA	<0.44	<0.44	[0.53]	<0.44

Notes:

ATSDR – Agency for Toxic Substance and Disease Registry

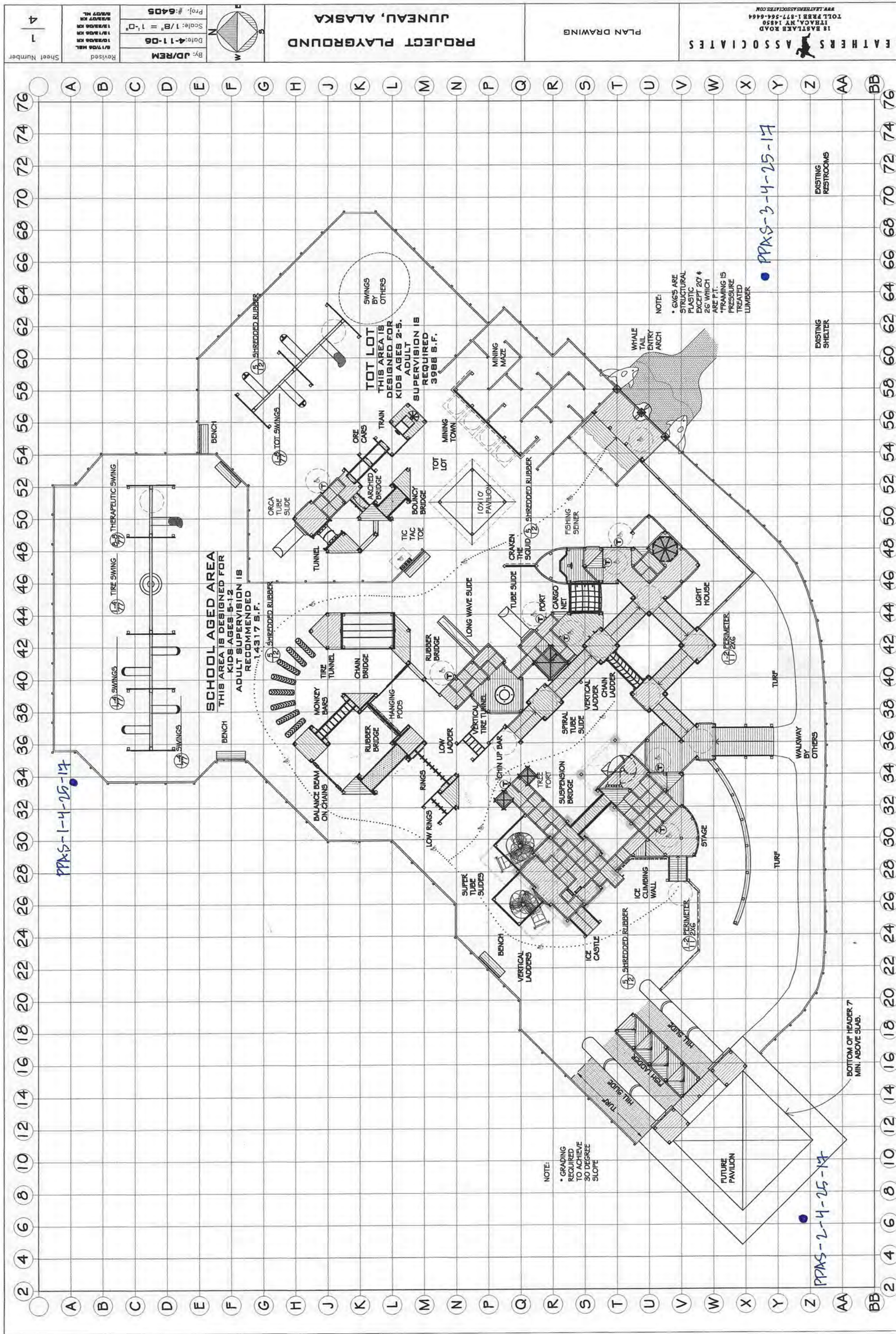
µg/m³ – micrograms per cubic meter

NA – not available

Acute levels are developed for exposure periods of 14 days or less.

Chronic levels are developed for exposure periods of 365 days or more.

[] - This result is between the limit of detection (LOD) and the limit of quantitation (LOQ) and has higher analytical uncertainty than values at or above the LOQ.



PROJECT PLAYGROUND
JUNEAU, ALASKA

PLAN DRAWING

EATHERS ASSOCIATES
18 EASTLAKE ROAD
ITRACA, NY 14850
TOLL FREE 1-877-564-6464
WWW.EATHERSASSOCIATES.COM

By: JD/REM
Date: 4-1-06
Scale: 1/8" = 1'-0"
Proj. #: 6405
Revised:
6/17/06 HBL
10/26/06 KJH
12/13/06 KJH
5/23/07 KJH
5/23/07 ML



by SKD date 1 May 2017 client CBJ
description PROJECT PLAYGROUND FIRE

DISPOSAL VOLUME ESTIMATES

SOIL/RUBBER VOL:

AREA MEASUREMENT TAKEN USING POLYGON TOOL
ON CBJ PARCEL VIEWER.

$$\text{AREA} = 0.48 \text{ ac} * 43,560 \text{ sf/ac} = 20,908 \text{ sf}$$

DEPTH \approx 1.0 ft (avg)

$$\text{VOL} = 20,908 \text{ sf} * 1 \text{ ft} * 1 \text{ cy}/27 \text{ cf}$$

$$= 774 \text{ CY RUBBER/SOL IN PLACE}$$

ASSUME 30% EXPANSION WHEN DISTURBED

$$\text{VOL} = 1,007 \text{ CY} \rightarrow \boxed{\text{ROUGHLY 1000 CY RUBBER/SOL}}$$

HAULING: NEEDS TO BE HAULED

IN COVERED TRUCKS,

SO 10 CY LOADS ARE

MOST LIKELY \rightarrow 100 COVERED LOADS

RUBBER SURFACING VOL:

ESTIMATED AREA OF RUBBER HC SURFACING

\approx 3,000 sf
RUBBER
SURFACING

- PROBABLY 10-12 TRUCK LOADS
(AWKWARD TO PACK, LIKE CARPET)

REMAINING STRUCTURAL VOL:

VISUAL ESTIMATE AFTER WALKING THROUGH
PLAYGROUND AREA, VERY BALLPARK EST!

$\boxed{37-40 \text{ 10 CY LOADS OF DEBRIS}}$