
MEMORANDUM

TO: LINDSAY MASTERS – COLORADO DEPARTMENT OF PUBLIC HEALTH & ENVIRONMENT, HAZARDOUS MATERIALS & WASTE MANAGEMENT DIVISION

FROM: TOM HARP - REMEDIATION RISK REDUCTION, LLC (R³)

SUBJECT: BI-WEEKLY STATUS UPDATE – THORNTON SHOPPING CENTER, NORTHWEST CORNER 88TH AND CORONA, THORNTON, CO – EPA #COR000212639, M&E 3.2, THORNTON LLC (THORNTON SHOPPING CENTER)

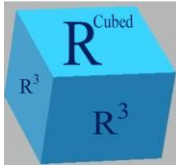
DATE: 3/10/2021

CC: THORNTON LLC

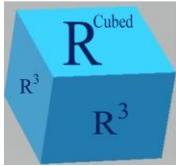
Lindsay;

Per the requirement stipulated in your June 23, 2020 correspondence, the *Bi-Weekly Status Update* for March 10, 2021 regarding the Thornton Shopping Center is as follows:

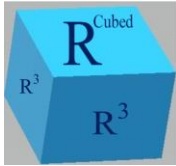
COMPANY/SUB CONTRACTOR	R ³ /Alpine Remediation, Inc.				
BOS 100 [®] INJECTED	BOS 100 [®] VOLUME (lbs.)	DEPTHS	DATE	SLURRY VOLUME (Tgal.)	INJECTION PRESSURE (psig.)
OFS-2 (pt.3)	105	16',18',20',22',24'	2/24/2021	375	1200 - 300
OFS-2 (pt.5)	150	16',18',20',22',24'	2/24/2021	375	1200 - 300
OFS-2 (pt.4)	105	15',17',19',21',23'	2/24/2021	375	900 - 300
OFS-2 (pt.1)	150	15',17',19',21',23'	2/24/2021	375	800 - 300
OFS-2 (pt.7)	105	15',17',19',21',23'	2/24/2021	375	800 - 300
OFS-2 (pt.2)	105	15',17',19',21',23'	2/24/2021	375	1200 - 300
OFS-2 (pt.6)	105	15',17',19',21',23'	2/24/2021	375	900 - 500
OFS-2 (pt.29)	105	15',17',19',21',23'	2/24/2021	375	1200 - 300
OFS-2 (pt.28)	150	16',18',20',22',24'	2/24/2021	375	800 - 400



OFS-2 (pt.33)	150	16',18',20',22',24'	2/26/2021	240	1200 - 300
OFS-2 (pt.30)	150	15',17',19',21',23'	2/26/2021	240	1200 - 300
OFS-2 (pt.31)	150	16',18',20',22',24'	2/26/2021	240	1200 - 400
OFS-2 (pt.32)	150	15',17',19',21',23'	2/26/2021	240	1200 - 500
NOTE: OFS-2 pts. 9, 12, 15, 18, 21, 24, and 26 were previously reported as having a BOS Volume of 105 lbs., but received 150 lbs.					
OFS-3 (pt.26)	93	16',18',20'	3/1/2021	225	1200 - 600
OFS-3 (pt.12)	-	-	3/1/2021	-	-
OFS-3 (pt.5)	62	15',17'	3/1/2021	150	1200 - 600
OFS-3 (pt.40)	155	15',17',19',21',23'	3/1/2021	375	1200 - 400
OFS-3 (pt.41)	155	16',18',20',22',24'	3/1/2021	375	1200 - 600
OFS-3 (pt.37)	116	16',18'	3/1/2021	150	1200 - 500
OFS-3 (pt.39)	290	16',18',20',22',24'	3/1/2021	375	1200 - 400
OFS-3 (pt.14)	116	16',18'	3/1/2021	150	1200 - 600
OFS-3 (pt.32)	155	16',18',20',22',24'	3/1/2021	375	1200 - 600
OFS-3 (pt.21)	93	15',17',19'	3/2/2021	225	1200 - 500
OFS-3 (pt.35)	155	15',17',19',21',23'	3/2/2021	375	1200 - 600
OFS-3 (pt.43)	62	15',17'	3/2/2021	150	1200 - 600
OFS-3 (pt.44)	62	16',18'	3/2/2021	150	1200 - 500
OFS-3 (pt.20)	93	16',18',20'	3/2/2021	225	1200 - 500
OFS-3 (pt.31)	62	15',17'	3/2/2021	150	1200 - 500
OFS-3 (pt.33)	93	15',17',19'	3/2/2021	225	1200 - 600



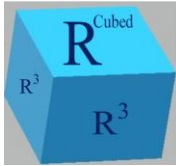
OFS-3 (pt.30)	93	16',18',20'	3/2/2021	225	1200 - 500
OFS-3 (pt.17)	62	15',17'	3/2/2021	150	1200 - 500
OFS-3 (pt.16)	62	16',18'	3/2/2021	150	1200 - 400
OFS-3 (pt.24)	93	16',18',20'	3/3/2021	225	1200 - 400
OFS-3 (pt.13)	31	15'	3/3/2021	75	1200 - 500
OFS-3 (pt.10)	-	-	3/3/2021	-	-
OFS-3 (pt.9)	-	-	3/3/2021	-	-
NOTE: several injection depths in OFS-3 could not be completed due to refusal (discussed below).					
OFS-1 (pt.15)	280	15',17',19',21',23'	3/5/2021	375	900 - 450
OFS-1 (pt.19)	280	15',17',19',21',23'	3/5/2021	375	900 - 600
OFS-1 (pt.23)	280	15',17',19',21',23'	3/5/2021	375	800 - 300
OFS-1 (pt.26)	430	16',18',20',22',24'	3/5/2021	375	900 - 300
OFS-1 (pt.22)	-	-	3/5/2021	-	-
OFS-1 (pt.18)	56	16'	3/5/2021	75	600 - 300
OFS-1 (pt.25)	430	15',17',19',21',23'	3/5/2021	375	900 - 450
OFS-1 (pt.11)	280	15',17',19',21',23'	3/5/2021	375	1000 - 350
OFS-1 (pt.16)	280	16',18',20',22',24'	3/5/2021	375	1000 - 300
OFS-1 (pt.14)	280	16',18',20',22',24'	3/8/2021	375	1200 - 200
OFS-1 (pt.29)	430	15',17',19',21',23'	3/8/2021	375	1200 - 300
OFS-1 (pt.10)	280	16',18',20',22',24'	3/8/2021	375	1200 - 300
OFS-1 (pt.20)	280	16',18',20',22',24'	3/8/2021	375	1200 - 300



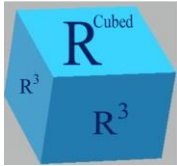
OFS-1 (pt.9)	280	15',17',19',21',23'	3/8/2021	375	1200 - 300
OFS-1 (pt.24)	280	16',18',20',22',24'	3/8/2021	375	1200 - 300
OFS-1 (pt.27)	430	15',17',19',21',23'	3/8/2021	375	1200 - 300

HIGHLIGHTED INJECTION POINTS ARE LOCATED ON THE UPGRADIENT BOUNDARY OF TREATMENT AREAS AND RECEIVED ADDITIONAL BOS 100[®] VOLUMES FOR PRB PURPOSES

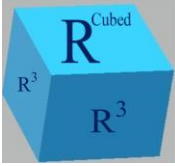
SUPPLEMENTAL SAMPLING	SAMPLES	DATE COLLECTED	DATE OF RESULTS		
OFS-3 (MW-18)	1	3/1/2021	pending		
OFS-2 (MW-20)	1	3/5/2021	pending		
OFS-1 (MW-19)	1	3/5/2021	pending		
OFS-5 (MW-24)	1	3/5/2021	pending		
SOLID WASTE GENERATED	NO. OF DRUMS SOIL	NO. OF DRUMS WATER	HAZARDOUS WASTE GENERATED	NO. OF DRUMS SOIL	NO. OF DRUMS WATER
OFS-2	N/A				
OFS-3	N/A				
OFS-1	N/A				
OTHER PLANNED ACTIVITIES	ESTIMATED SCHEDULE	POTENTIAL ROADBLOCKS/ DELAYS			
CDPHE and Thornton LLC/Jay Brown agreed to a <i>Joint Motion for Entry of Stipulated Injunction.</i>	11/23/2020 Phase I offsite installation to be completed by 3/15/2021. Phase II offsite installation to be completed by 6/1/2021.				



CDPHE requested that offsite wells MW-29, MW-30, and MW-31 (installed by RETTEW) be sampled in 2020.	12/08/2020				
R ³ collected groundwater samples from offsite wells MW-29, MW-30, and MW-31.	12/10/2020				
R ³ submitted the <i>Second Semi-Annual 2020 Groundwater Monitoring Report Addendum</i> to the CDPHE for review and approval.	01/08/2021	Awaiting CDPHE response.			
R ³ commenced Phase I injections in Treatment Area OFS-2.	2/16/2021				
R ³ completed injections in Treatment Area OFS-2.	2/26/2021				
R ³ commenced Phase I injections in Treatment Area OFS-3.	3/1/2021				
R ³ ceased Phase I injections in Treatment Area OFS-3 due to refusal issues.	3/3/2021	Awaiting approval of alternative injection method, e.g., “pre-drilling” from CDPHE.			
R ³ took delivery of all BOS 100 for Phase I and Phase II.	3/4/2021				



<p>R³ commenced Phase I injections in Treatment Area OFS-1.</p>	<p>3/5/2021</p>				
<p>Thornton LLC and City of Thornton conferred to discuss current available options going forward with the development/ remediation of the Thornton Shopping Center.</p>	<p>3/10/2021</p>				
<p>Thornton LLC is working with Sterling Design design/architectural/ surveying team to subdivide the Shopping Center to sell additional parcels to developers. With that in mind, Thornton LLC is in discussion with real estate brokers and multiple potential users for the site to develop a subdivision plan that works more closely with their needs.</p> <p>Thornton LLC is conferring with potential purchasers of the complete Shopping Center; has received one offer and has made a counteroffer.</p> <p>Thornton LLC has built a construction</p>	<p>Ongoing</p>				



<p>fence around the vacant east buildings (8954 – 8988) to protect against vagrants prior to demolition, which is anticipated to occur after remediation of asbestos in the Spring of 2021. Thornton LLC is aware that any remediation will be done by a licensed contractor, per CDPHE requirements.</p> <p>Abatement permit has been obtained; beginning of abatement scheduled for March 18, 2021.</p>					
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I will notify you if there are any pending additions/deletions to this update. Please do not hesitate to contact me should you have any questions or require additional information.

Sincerely,

REMEDICATION RISK REDUCTION, LLC

Thomas A. Harp, P.G., M.S.C.E., M.B.A.

Principal