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## INJECTION SUMMARY REPORT

**HALSELL'S GROCERY STATE-LEAD SITE**

**112 SCHOOL STREET**

**HATCH, NM**

**FACILITY #6053**

**RID #287**

**WPID 4222-4**



**MAY 17, 2022**



**Souder, Miller & Associates**  
Engineering ♦ Environmental ♦ Geomatics

3500 Sedona Hills Parkway ♦ Las Cruces, NM 88011  
575.647.0799 ♦ 800.647.0799 ♦ fax 575.647.0680 ♦ [www.soudermiller.com](http://www.soudermiller.com)

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# INJECTION SUMMARY REPORT HALSELL'S GROCERY STATE-LEAD SITE

112 SCHOOL STREET  
HATCH, NEW MEXICO

FACILITY #6053      RID #287      WPID #4222-4

May 17, 2022

## 1.0 INTRODUCTION

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Injection activities occurred at the Halsell's Grocery State Lead site from April 26 – 28, 2022 to address residual petroleum hydrocarbon contamination, specifically dissolved-phase benzene, in the subsurface that resulted from the former underground storage tank (UST) system. Souder, Miller & Associates (SMA) observed the injection activities performed by Remington Technologies, LLC (Remington), which included an in-situ remedial solution comprised of chemically oxygenated granular activated carbon (COGAC™). This report summarizes the field activities and initial consensus of the injection success.

This work was performed in accordance with the approved workplan, Final Remediation Plan (FRP), and Contract #22 667 3200 0002. Details of the selection of injectate and remedial approach can be found in SMA's *Submittal of Quote for Remediation Activities for Halsell's Grocery State-Lead Site*, dated May 3, 2021.

## 2.0 INJECTION ACTIVITIES SUMMARY

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A week prior to the planned injection activities, a New Mexico 811 One Call was submitted by Remington to locate nearby buried utilities. According to Remington, utilities were marked upon arrival and no buried lines were identified within the planned treatment area.

Injection activities were performed by Remington over the course of three days, including site prep, injection, borehole plugging, and cleanup. A daily safety meeting was held prior to each day's activities.

A COGAC™ mix was diluted to 12% solution with fresh water and injected into 28 boring locations. The treatment area was approximately 2,000 square-feet and included the former UST basin and dispenser island. A total of 3,360 gallons of the 12% solution was injected evenly over the area of contamination (approximately 120 gallons per borehole). The order of the injection locations varied based on customer parking and business activities, as well as the potential for short-circuiting to occur in adjacent injection points. The location of each injection point is shown in Figure 1.

Remington utilized a 7822DT Geoprobe to advance a 2.25-inch rod using direct push technology into the 28 pre-marked injection point locations. Injection was done under varying pressures to minimize surfacing using a bottom-up injection method, starting at 16 feet below ground surface (bgs) and ending at 10 feet bgs. Due to site geology, average injection flow rates ranged from 1.6 gallons per minute (gpm) to 20.0 gpm. A total of 3,360 gallons of 12% COGAC™ solution was injected over the treatment area.

Surfacing occurred on injection locations 1-3, 8, 22, 25, and 28. Most of the surfacing was due to COGAC™ solution flowing up the annular space between the borehole and the drill rod. Per Remington, the amount of surfacing was minimal, and the solution was allowed to sit at the injection point until it gravity fed back down the borehole. Remington also noted that some surfacing occurred at injection location 22 due to a large crack in the asphalt.

A Site Map (Figure 1) showing the general site layout, existing monitoring wells, buried utilities, and injection point locations is attached. An injection log, including times, injection depth intervals, pressure, flow rates, etc. is included in Remington's summary report (Appendix A, Table 1).

A photolog is included in Appendix B, and field notes and daily safety briefings are included in Appendix C. The discharge permit, DP-1937, is included in Appendix D.

### **3.0 POST-INJECTION ACTIVITIES & SITE RESTORATION**

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After each injection, Remington backfilled the borehole with sand from total depth (16 ft bgs) to the top of the water table (approximately 13 ft bgs). This allows for groundwater to continue to flow unimpeded through the natural water column. Three-eighths-inch hydrated bentonite was placed from the top of the water column at 13 ft bgs to approximately 0.5 ft bgs. Cold patch asphalt was then placed from 0.5 ft bgs to surface to match the surrounding parking lot.

Upon completion of all injections and plugging activities, the parking area was cleared of trash, broomed, and washed with fresh water into a confined area for drying and additional brooming.

No contaminated waste was generated during the injection process. All other waste was hauled off-site and properly disposed.

### **4.0 POST-INJECTION ANALYSIS**

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Per consultation with Remington, the formation appeared to take the COGAC™ solution very well, particularly at depths 12-16 feet bgs. Remington noted that closer to 10 feet bgs there was more potential for surfacing to occur via the borehole. Surfacing volume was minimal and allowed to gravity feed back down the borehole.

Deviations from the March 24, 2022 FRP included flow rates of the injection and the plugging activities of the boreholes. The FRP stated that injection rates were planned at 20 gpm, but due to variability in site geology, the pressure was reduced as needed and no greater than 20 gpm. Additionally, each borehole was to be plugged from total depth to 1.5 ft bgs with bentonite. Per Remington's experience with numerous and tight spacing of injections, placing sand in the water column, rather than bentonite, allows better natural groundwater flow and COGAC™ coverage.

There were no other deviations from the FRP.

This report completes WPID 4222-4. Per the approved workplan, SMA will submit a written inquiry to PSTB to determine if a post-injection groundwater sampling event is requested.



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Stephanie Hinds, P.E.  
Project Engineer

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May 17, 2022

Date



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Scott McKittrick, P.G.  
Vice President/Environmental Technical Sector Director

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May 17, 2022

Date

## Figures



N  
W E  
S

LEGEND

● INJECTION POINT LOCATIONS

0 15 30  
SCALE IN FEET

NOTES



Figure 1.  
Injection points

Halsell's Grocery  
112 School st.  
Hatch, New Mexico

## Appendix A

Remington Technologies, LLC Injection Report





Soil and Groundwater Remediation  
3109 35<sup>th</sup> Ave.  
Greeley, CO 80634  
(970) 278-1646

Stephanie Hinds  
Souder Miller Associates  
112 West Montezuma Ave. Suite 3  
Cortez, CO 81321

May 16, 2022

Re: COGAC Injection Report  
Halsell's Grocery  
112 School St.  
Hatch, New Mexico, 87937

Dear Mrs. Hind,

Remington Technologies, LLC (Remington) personnel and equipment mobilized on April 25, 2022, for a COGAC injection event at the above referenced site. During the event, 3,360 gallons of remedial solution was injected into 28 temporary injection points. Remington completed the work in three days.

#### **Pre-Injection Activities**

- Remington discussed the Scope of Work (SOW) with Stephanie Hinds with Souder Miller. An initial plan to perform tasks was communicated between the party representatives of Souder Miller and Remington.
- Before work began, the job hazard analyses (JHAs), health and safety plan (HASP), and emergency evacuation routes were discussed.
- The daily safety meetings were documented by signing Remington's daily tailgate forms. These forms were kept in the Remington company vehicle for inspection for the duration of the project.

#### **Injection Activities**

- Water for injection and cleanup activities was obtained from a city hydrant.
- Remington utilized a 7822DT Geoprobe to advance a 2.25-inch rod using direct push technology at each of the temporary injection locations.
- A 12% COGAC solution was injected into the temporary injection points.
- The remedial solution was pumped into the specified treatment injection depths as discussed between Souder Miller and Remington.
- A bottom-up injection method was employed during the injection event.
- A total of 3,360 gallons of the 12% solution was injected throughout the event.
- After the injections, Remington patched all temporary injection points with an asphalt cold patch and cleaned/restored all site conditions to like or better conditions.
- All actions were communicated with the Souder Miller representative.

Below are details from the proposed and completed SOW:

Proposed SOW	Completed SOW
28 temporary injection points	28 temporary injection points
3,360 gallons of 12% COGAC solution	3,360 gallons of 12% COGAC solution

**Waste Disposal**

During this event, no contaminated waste was generated. Therefore, no drums were used.

**Summary**

In summary, the work proposed for the Halsell's Grocery site was successfully completed in three workdays. A total of 3,360 gallons of a 12% COGAC solution was injected.

Details regarding each injection location, including job site location, injection point identification numbers, injection times, volumes, injection depths, flow rates, pressures, etc., can be viewed below in Table 1. The injection point locations are illustrated on the attached figure.

Before Remington personnel departed, representatives conducted a site walk to pick up any remaining items on site.

If you have any questions or comments, please contact me at (970) 278-1646.

Sincerely,

**Remington Technologies, LLC**



Ryan Millunzi  
Project Manager  
[rmillunzi@remingtontech.net](mailto:rmillunzi@remingtontech.net)

Table 1

Injection Log																	
Client			Souder Miller							Client Representative			Stephanie Hinds				
Location			Halsell's Grocery							Remington Technicians			Jeff Carlo, Rich Morris				
Injection Scope of Work			COGAC 12%														
Injection Point	Date (m/d/y)	Start Time (hh:mm)	End Time (hh:mm)	Total Time (min)	Injection Interval (bgs)	Average Pressure (psi)	Solution %	Total Injected @ interval (gal)	Total Injected @ interval (lbs.)	Average Flow Rate (gpm)	Pump Method	Borehole Clearance Method	Drilling Method	Break Through Pressure (psi)	Surface Y/N	Feet / Direction Surfacing	
1	4/26/22	10:30	11:30	60	16-10	50	12%	120	120.0	2.0	Diaphragm	None	Direct Push	50	Y	Rod	
2	4/26/22	11:45	13:00	75	16-10	150	12%	120	120.0	1.6	SPX	None	Direct Push	200	Y	Rod	
3	4/26/22	13:15	13:58	43	16-10	150	12%	120	120.0	2.8	SPX	None	Direct Push	200	Y	Rod	
4	4/26/22	14:15	15:00	45	16-10	200/30	12%	120	120.0	2.7	SPX	None	Direct Push	250	N	None	
5	4/26/22	15:25	15:35	10	16-10	45	12%	120	120.0	12.0	SPX	None	Direct Push	45	N	None	
6	4/26/22	15:46	16:00	14	16-10	45	12%	120	120.0	8.6	SPX	None	Direct Push	45	N	None	
7	4/26/22	16:40	17:15	35	16-10	50	12%	120	120.0	3.4	SPX	None	Direct Push	50	N	None	
8	4/26/22	17:25	18:10	45	16-10	75	12%	120	120.0	2.7	SPX	None	Direct Push	100	Y	Rod	
9	4/27/22	8:10	9:05	55	16-10	45	12%	120	120.0	2.2	SPX	None	Direct Push	100	N	None	
10	4/27/22	9:18	9:42	24	16-10	50	12%	120	120.0	5.0	SPX	None	Direct Push	275	N	None	
11	4/27/22	9:52	10:15	23	16-10	75	12%	120	120.0	5.2	SPX	None	Direct Push	100	N	None	
12	4/27/22	10:25	10:50	25	16-10	75	12%	120	120.0	4.8	SPX	None	Direct Push	200	N	None	
13	4/27/22	11:00	11:40	40	16-10	45	12%	120	120.0	3.0	SPX	None	Direct Push	50	N	None	
14	4/27/22	11:55	12:10	15	16-10	55	12%	120	120.0	8.0	SPX	None	Direct Push	100	N	None	
15	4/27/22	12:25	12:35	10	16-10	40	12%	120	120.0	12.0	SPX	None	Direct Push	50	N	None	
16	4/27/22	12:42	13:05	23	16-10	75	12%	120	120.0	5.2	SPX	None	Direct Push	150	N	None	
17	4/27/22	13:30	13:45	15	16-10	55	12%	120	120.0	8.0	SPX	None	Direct Push	75	N	None	
18	4/27/22	13:51	14:10	19	16-10	100	12%	120	120.0	6.3	SPX	None	Direct Push	125	N	None	
19	4/27/22	14:20	14:30	10	16-10	100	12%	120	120.0	12.0	SPX	None	Direct Push	125	N	None	
20	4/27/22	14:47	15:10	23	16-10	100	12%	120	120.0	5.2	SPX	None	Direct Push	125	N	None	
21	4/27/22	15:36	15:45	9	16-10	125	12%	120	120.0	13.3	SPX	None	Direct Push	150	N	None	
22	4/27/22	15:54	16:08	14	16-10	100	12%	120	120.0	8.6	SPX	None	Direct Push	175	Y	Asphalt Crack	
23	4/27/22	16:22	16:32	10	16-10	80	12%	120	120.0	12.0	SPX	None	Direct Push	100	N	None	
24	4/27/22	16:48	17:00	12	16-10	75	12%	120	120.0	10.0	SPX	None	Direct Push	100	N	None	
25	4/28/22	8:14	8:20	6	16-10	50	12%	120	120.0	20.0	SPX	None	Direct Push	55	Y	Rod	
26	4/28/22	8:31	8:55	24	16-10	75	12%	120	120.0	5.0	SPX	None	Direct Push	250	N	None	
27	4/28/22	9:05	9:16	11	16-10	45	12%	120	120.0	10.9	SPX	None	Direct Push	50	N	None	
28	4/28/22	9:28	9:40	12	16-10	100	12%	120	120.0	10.0	SPX	None	Direct Push	200	Y	Rod	
Number of Injection Points		28		Total Injected (gal)					3,360		Total Chemical (lbs)					3,360	

## Appendix B

Photolog

### Photolog



*Photo 1. Pre-marked injection locations.*



*Photo 2. Pre-marked injection locations.*



Photo 3. Geoprobe 7822DT and containers of 12% COGAC™ solution.



Photo 4. Injection solution tanks, bags of bentonite, and cold-patch asphalt.



Photo 5. Drilling via direct push with Geoprobe.



Photo 6. Injection of COGAC™ solution.



*Photo 7. Injection borehole prior to plugging.*



*Photo 8. Plugged injection borehole.*



## Appendix C

Field Notes  
Daily Tailgate Safety Checklist

Halsell's Grocery  
PO: 3330252 Task 4  
Injection

4/26/22

Personel:

Alicia Lopez (SMA)  
Jeff

Equipment:

Geo probe 7822DT

Location:

112 School Street  
Hatch NM

Safety:

Tailgate meeting done by  
Remington

7:30 - arrive on site

- Remington conducted tailgate meeting; JHAs were signed.

- SMA marked injection locations on concrete w/ white paint

- Remington collected water from city

10:30 - Remington begins first point

- used Geoprobe to direct push to 15 feet below ground surface
- attached pump to casing
- pumps cement material in hole ~50 psi; 120 gallons

11:30

- complete injection for first point
- Remington moving to next point.

11:45

Began @ second point

- hoses got clogged.
- 150 average pressure; breakthrough was 200 psi

13:00

complete injection point 2.

13:15 began injection point 3  
150 psi; broke through @ 200 psi  
120 gallons.

14:00 stop time for point 3  
- Remington went to collect more water

14:15 began injection point 4  
Same methods as above

14:55 stop time for point 4

15:20 began point 5  
Same method as above

15:40 stop point 5

15:55 began point 6  
- driller says he thinks he hit proch.  
because injections going so fast.

16:30 stop point 6

- property owner approached work zone  
and did not want us on his property.  
PM was contacted.

16:55 began point 7

stop point 7

17:15 began point 8  
17:45 finished point 8

- Remington backfilled all  
8 boreholes that were made  
today; backfilled w/ bentonite

- Remington cleaned up site  
& prep'd for tomorrow's field  
activities.

18:30 left site / return to office  
- phone call w/ Jay Van Brindghem  
to discuss scope & issues  
with property owner.

- issues were resolved with the  
owner and we are ok to  
continue work tomorrow

## Day 2

- 06:30 arrive @ office  
travel to site
- 7:00 arrive on site / meet w/ Remington  
Remington began set up on site
- 7:45 began point 9  
average 50 psi; 120 gallons
- 9:00 stopped point 9
- 9:15 began point 10  
275 psi - 45 psi average  
finished point 10
- 9:50 began point 11  
~~some as above~~ 75 psi
- 10:15 finished point 11
- 10:25 began point 12  
75 psi
- 10:50 finished point 12
- 11:00 began point 13  
75 psi
- 11:40 finish point 13

- 11:45 began point 14  
50 psi average
- 12:15 finish point 14
- 12:17 began point 15
- 12:35 finish point 15
- 12:45 began point 16
- 13:00 finish point 16
- 13:20 began point 17
- 13:45 finish point 17
- 13:50 began point 18
- 14:00 finished point 18
- 14:15 began point 16-19
- 14:45 finish 19
- 14:50 began 20
- 15:10 finish 20
- 15:20 began point 21
- 15:45 finish point 21

16:00 began point 22  
Finish point 22

16:15 began point 23  
16:35 finish point 23

16:45 began point 24  
17:15 finish point 24

- Remington cleans up site +  
preps for day 3.

average break through pressure  
for injection points was 200 psi

- average injection pressure  
was 50 psi for today's  
points.

- Remington has point locations  
recorded.

- return to office

APL 4/28/22

### Day 3

7:00 arrive on site  
meet with Remington + have tailgate  
meeting  
- Remington starts preping and preparing  
work zone

7:00 began point 25

DTW in MW-1  
13.05

well was not affected

8:20 finish point 25

8:30 began point 26

9:00 finish point 26

9:10 start point 27

9:20 finish point 27

9:25 began point 28

9:40 finished point 28

## Daily Tailgate Meeting Checklist

Site Name: Halsells  
 Site Address: \_\_\_\_\_  
 Work Being Performed: COGAC Inj  
 Date & Time of Meeting: 4/28/22 800 Weather: 70° Sunny  
 Name of Presenter: Jeff Cole

Itemize the Specific Topics Discussed (if more space is needed use the back of this page):

### 6 REMINGTON CARDINAL SAFETY PRINCIPLES

- I will report to work physically rested and mentally alert
- I will be responsible for my actions
- I will communicate with my co-workers
- I will be aware of all changing site conditions that may impact safety
- I will NOT tolerate willful unsafe acts
- I will STOP all unsafe work

<input checked="" type="checkbox"/> Introductions	<input checked="" type="checkbox"/> PPE check - Level D
<input checked="" type="checkbox"/> Scope of Work Discussion	<input checked="" type="checkbox"/> Special PPE - Respirator, face shield etc.
<input checked="" type="checkbox"/> Site Walk	<input checked="" type="checkbox"/> JHAs reviewed prior to work start
<input checked="" type="checkbox"/> Utility locations checked - Look up	<input checked="" type="checkbox"/> Overhead Obstacles
<input checked="" type="checkbox"/> STOP WORK Authority	<u>NA</u> Short Service Employees (List them)
<input checked="" type="checkbox"/> Hospital Location/Route Explained	<input checked="" type="checkbox"/> Good Housekeeping
<input checked="" type="checkbox"/> HASP Reviewed	<input checked="" type="checkbox"/> Communication with Mixer in Box Truck
<input checked="" type="checkbox"/> Emergency Evacuation Areas	<input checked="" type="checkbox"/> Exclusion zone
<input checked="" type="checkbox"/> Eye Wash/First Aid Kit Location	<input checked="" type="checkbox"/> Eating/Drinking/Smoking/Cell Phones
<input checked="" type="checkbox"/> Spotters needed for moving equipment	<input checked="" type="checkbox"/> Stakeholders - direct to client
<input checked="" type="checkbox"/> Fire Extinguisher Location	<input checked="" type="checkbox"/> Heat Stress
<input checked="" type="checkbox"/> 3 Points of Contact for equipment	<input checked="" type="checkbox"/> Cold Stress
<input checked="" type="checkbox"/> Proper Lifting Technique	<input checked="" type="checkbox"/> Equipment Inspections
	<input checked="" type="checkbox"/> Shared Learnings

### Job Hazard Analyses:

<input type="checkbox"/> Arrival & Site Setup	<input type="checkbox"/> Well Injections	<input type="checkbox"/> Saw Cutting	<input type="checkbox"/> Jack Hammer Operations
<input type="checkbox"/> Core Drilling	<input type="checkbox"/> Probe Rod Retrieval	<input type="checkbox"/> Skid Steer Operations	<input type="checkbox"/> Well Plugging Operations
<input type="checkbox"/> Air Knife / Vacuum Unit	<input type="checkbox"/> High Pressure Injection	<input type="checkbox"/> Excavator Operations	<input type="checkbox"/> Trenching / Piping
<input type="checkbox"/> Hand Augering	<input checked="" type="checkbox"/> COGAC Injection	<input type="checkbox"/> Pea Rock / Flow Fill	<input type="checkbox"/> Trench Plates
<input checked="" type="checkbox"/> Drilling / Direct Push	<input type="checkbox"/> Asphalt Installation	<input type="checkbox"/> Ex-Situ Chemical Oxidation	<input type="checkbox"/> Building Demolition
<input checked="" type="checkbox"/> Chemical Mixing	<input type="checkbox"/> Concrete Installation	<input type="checkbox"/> Pipe Threading & Laying	<input type="checkbox"/> Awning Demolition
<input type="checkbox"/> ISCO	<input type="checkbox"/> Lawn Care Operations	<input type="checkbox"/> Front End Loader	<input type="checkbox"/> UST Removal
<input type="checkbox"/> Subcontractors / Site Visitors	<input type="checkbox"/> Blank JHA	<input type="checkbox"/> Drum Moving	<input type="checkbox"/> Site Cleanup

- I have participated in the Job Hazard Analysis (JHAs) review and discussion of the above referenced JHAs.
- I have read and understood the contents of this Site Health and Safety Plan and I agree to abide by all provisions specified within.

### Daily Safety Tailgate Meeting Participants (Use the back of this form if needed)

Print Name:	Signature:	Company:	Date:
Jeff Cole	<i>[Signature]</i>	Bentech	4/26/22
Rich Morris	<i>[Signature]</i>	Remington	4/26/22
Alicia Lopez	<i>[Signature]</i>	SMA	4/26/22

## Daily Tailgate Meeting Checklist

**Site Name:** Hasells  
**Site Address:** \_\_\_\_\_  
**Work Being Performed:** Injection  
**Date & Time of Meeting:** 4/27/22 0700 **Weather:** Clear Sunny 80+°  
**Name of Presenter:** Jeff Carlo

Itemize the Specific Topics Discussed (if more space is needed use the back of this page):

### 6 REMINGTON CARDINAL SAFETY PRINCIPLES

- I will report to work physically rested and mentally alert
- I will be responsible for my actions
- I will communicate with my co-workers
- I will be aware of all changing site conditions that may impact safety
- I will NOT tolerate willful unsafe acts
- I will STOP all unsafe work

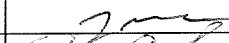

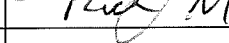
<input checked="" type="checkbox"/> Introductions	<input checked="" type="checkbox"/> PPE check - Level D
<input checked="" type="checkbox"/> Scope of Work Discussion	<input checked="" type="checkbox"/> Special PPE - Respirator, face shield etc.
<input checked="" type="checkbox"/> Site Walk	<input checked="" type="checkbox"/> JHAs reviewed prior to work start
<input checked="" type="checkbox"/> Utility locations checked - Look up	<input checked="" type="checkbox"/> Overhead Obstacles
<input checked="" type="checkbox"/> STOP WORK Authority	<input checked="" type="checkbox"/> Short Service Employees (List them)
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<input checked="" type="checkbox"/> HASP Reviewed	<input checked="" type="checkbox"/> Communication with Mixer in Box Truck
<input checked="" type="checkbox"/> Emergency Evacuation Areas	<input checked="" type="checkbox"/> Exclusion zone
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<input checked="" type="checkbox"/> 3 Points of Contact for equipment	<input checked="" type="checkbox"/> Cold Stress
<input checked="" type="checkbox"/> Proper Lifting Technique	<input checked="" type="checkbox"/> Equipment Inspections
	<input checked="" type="checkbox"/> Shared Learnings

**Job Hazard Analyses:**

<input type="checkbox"/> Arrival & Site Setup	<input type="checkbox"/> Well Injections	<input type="checkbox"/> Saw Cutting	<input type="checkbox"/> Jack Hammer Operations
<input type="checkbox"/> Core Drilling	<input type="checkbox"/> Probe Rod Retrieval	<input type="checkbox"/> Skid Steer Operations	<input type="checkbox"/> Well Plugging Operations
<input type="checkbox"/> Air Knife / Vacuum Unit	<input type="checkbox"/> High Pressure Injection	<input type="checkbox"/> Excavator Operations	<input type="checkbox"/> Trenching / Piping
<input type="checkbox"/> Hand Augering	<input checked="" type="checkbox"/> COGAC Injection	<input type="checkbox"/> Pea Rock / Flow Fill	<input type="checkbox"/> Trench Plates
<input type="checkbox"/> Drilling / Direct Push	<input type="checkbox"/> Asphalt Installation	<input type="checkbox"/> Ex-Situ Chemical Oxidation	<input type="checkbox"/> Building Demolition
<input type="checkbox"/> Chemical Mixing	<input type="checkbox"/> Concrete Installation	<input type="checkbox"/> Pipe Threading & Laying	<input type="checkbox"/> Awning Demolition
<input type="checkbox"/> ISCO	<input type="checkbox"/> Lawn Care Operations	<input type="checkbox"/> Front End Loader	<input type="checkbox"/> UST Removal
<input type="checkbox"/> Subcontractors / Site Visitors	<input type="checkbox"/> Blank JHA	<input type="checkbox"/> Drum Moving	<input type="checkbox"/> Site Cleanup

- I have participated in the Job Hazard Analysis (JHAs) review and discussion of the above referenced JHAs.
- I have read and understood the contents of this Site Health and Safety Plan and I agree to abide by all provisions specified within.

**Daily Safety Tailgate Meeting Participants (Use the back of this form if needed)**

Print Name:	Signature:	Company:	Date:
Jeff Carlo		Rem Tech	4/27/22
Alicia Lopez		SMA	4/27/22
Rich Morris		Remington	4/27/22

## Daily Tailgate Meeting Checklist

Site Name: Hasells  
 Site Address: \_\_\_\_\_  
 Work Being Performed: Injection  
 Date & Time of Meeting: 4/28/22 Weather: Sunny  
 Name of Presenter: Jeff Carlo

Itemize the Specific Topics Discussed (if more space is needed use the back of this page):

### 6 REMINGTON CARDINAL SAFETY PRINCIPLES

- I will report to work physically rested and mentally alert
- I will be responsible for my actions
- I will communicate with my co-workers
- I will be aware of all changing site conditions that may impact safety
- I will NOT tolerate willful unsafe acts
- I will STOP all unsafe work

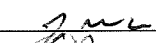

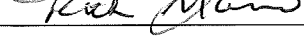
<input checked="" type="checkbox"/> Introductions	<input checked="" type="checkbox"/> PPE check - Level D
<input checked="" type="checkbox"/> Scope of Work Discussion	<input checked="" type="checkbox"/> Special PPE - Respirator, face shield etc.
<input checked="" type="checkbox"/> Site Walk	<input checked="" type="checkbox"/> JHAs reviewed prior to work start
<input checked="" type="checkbox"/> Utility locations checked - Look up	<input checked="" type="checkbox"/> Overhead Obstacles
<input checked="" type="checkbox"/> STOP WORK Authority	<u>NA</u> Short Service Employees (List them)
<input checked="" type="checkbox"/> Hospital Location/Route Explained	<input checked="" type="checkbox"/> Good Housekeeping
<input checked="" type="checkbox"/> HASP Reviewed	<input checked="" type="checkbox"/> Communication with Mixer in Box Truck
<input checked="" type="checkbox"/> Emergency Evacuation Areas	<input checked="" type="checkbox"/> Exclusion zone
<input checked="" type="checkbox"/> Eye Wash/First Aid Kit Location	<input checked="" type="checkbox"/> Eating/Drinking/Smoking/Cell Phones
<input checked="" type="checkbox"/> Spotters needed for moving equipment	<input checked="" type="checkbox"/> Stakeholders - direct to client
<input checked="" type="checkbox"/> Fire Extinguisher Location	<input checked="" type="checkbox"/> Heat Stress
<input checked="" type="checkbox"/> 3 Points of Contact for equipment	<input checked="" type="checkbox"/> Cold Stress
<input checked="" type="checkbox"/> Proper Lifting Technique	<input checked="" type="checkbox"/> Equipment Inspections
	<input checked="" type="checkbox"/> Shared Learnings

#### Job Hazard Analyses:

<input type="checkbox"/> Arrival & Site Setup	<input type="checkbox"/> Well Injections	<input type="checkbox"/> Saw Cutting	<input type="checkbox"/> Jack Hammer Operations
<input type="checkbox"/> Core Drilling	<input type="checkbox"/> Probe Rod Retrieval	<input type="checkbox"/> Skid Steer Operations	<input type="checkbox"/> Well Plugging Operations
<input type="checkbox"/> Air Knife / Vacuum Unit	<input type="checkbox"/> High Pressure Injection	<input type="checkbox"/> Excavator Operations	<input type="checkbox"/> Trenching / Piping
<input type="checkbox"/> Hand Augering	<input checked="" type="checkbox"/> COGAC Injection	<input type="checkbox"/> Pea Rock / Flow Fill	<input type="checkbox"/> Trench Plates
<input type="checkbox"/> Drilling / Direct Push	<input type="checkbox"/> Asphalt Installation	<input type="checkbox"/> Ex-Situ Chemical Oxidation	<input type="checkbox"/> Building Demolition
<input checked="" type="checkbox"/> Chemical Mixing	<input type="checkbox"/> Concrete Installation	<input type="checkbox"/> Pipe Threading & Laying	<input type="checkbox"/> Awning Demolition
<input type="checkbox"/> ISCO	<input type="checkbox"/> Lawn Care Operations	<input type="checkbox"/> Front End Loader	<input type="checkbox"/> UST Removal
<input type="checkbox"/> Subcontractors / Site Visitors	<input type="checkbox"/> Blank JHA	<input type="checkbox"/> Drum Moving	<input type="checkbox"/> Site Cleanup

- I have participated in the Job Hazard Analysis (JHAs) review and discussion of the above referenced JHAs.
- I have read and understood the contents of this Site Health and Safety Plan and I agree to abide by all provisions specified within.

#### Daily Safety Tailgate Meeting Participants (Use the back of this form if needed)

Print Name:	Signature:	Company:	Date:
Jeff Carlo		RT	4/28/22
Alicia Lopez		SMA	4/28/22
Rick Moares		Remington	4/28/22



## **Appendix D**

Discharge Permit DP-1937



**NEW MEXICO ENVIRONMENT DEPARTMENT GROUND  
WATER QUALITY BUREAU**

**UNDERGROUND INJECTION CONTROL**

**GENERAL DISCHARGE PERMIT**



**Certified Mail- Return Receipt Requested**

**Facility Name:** Halsell's Grocery State-Lead Site FID #6053

**Facility Location:** 112 School Road, Hatch, NM 87937  
Section 9, Township 19S, Range 3W  
Dona Ana County

**Legally Responsible Party:** New Mexico Environment Department (NMED)  
Petroleum Storage Tank Bureau (PSTB) Remedial  
Action Program, Attn: Lorena Goerger  
2905 Rodeo Park Drive, Building 1, Santa Fe, NM  
87505  
(505) 827-2855

**Remediation Oversight Agency Contact:** NMED Petroleum Storage Tank Bureau  
Lorena Goerger  
(505) 670-9618

**Remediation or Injection Plan Identification:** Final Remediation Plan, Halsell's Grocery State-  
Lead Site, 112 School Road, Hatch NM

**Permitting Action:** New DP-1937

**PPS Contact** Avery Young  
(505) 699-8564

**EFFECTIVE DATE:** March 3, 2022 **TERM ENDS:** March 2, 2027

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**Justin D. Ball, Chief**  
**Ground Water Quality Bureau**

[Subsection H of 20.6.2.3109 NMAC, NMSA 1978, § 74-6-5.]

Version updated December 5, 2018

**I. UIC GENERAL DISCHARGE PERMIT**

The New Mexico Environment Department (NMED) Ground Water Quality Bureau (GWQB) issues this Underground Injection Control General Discharge Permit (UIC Permit) for the subsurface emplacement of additive fluids through a Class V UIC injection well for the purpose of facilitating vadose zone or groundwater remediation. The GWQB issues this UIC Permit to New Mexico Environment Department Petroleum Storage Tank Bureau (NMED PSTB) (Permittee) pursuant to the New Mexico Water Quality Act (WQA), NMSA 1978 §§74-6-1 through 74-6-17, and the New Mexico Water Quality Control Commission (WQCC) Ground and Surface Water Protection Regulations, 20.6.2 NMAC.

In issuing this UIC Permit, the GWQB has determined that the requirements of Subsection C of 20.6.2.3109 NMAC have been met. The activities authorized by this UIC Permit are principally governed by Final Remediation Plan, Halsell's Grocery State-Lead Site (Injection Plan), under the authority of Statutes/Regulations, with oversight by the NMED PSTB. Compliance with this UIC Permit requires compliance with the terms, requirements, and conditions of the Injection Plan. The term of this UIC Permit shall be no longer than five years from the effective date of this UIC Permit.

The injection activities, the location of the injection site, the type of injection and quantities of additives being used are briefly described as follows:

**Injection Activities (summary: including injection well type, number of wells, and injection frequency)**

Copy of the Injection Plan Attached (required):

Summary of Injection Plan: Injection of COGAC (chemically oxygenated granular activated carbon) solution to treat persistent dissolved-phase petroleum hydrocarbons in shallow groundwater (~10 ft below ground surface(bgs)) at former underground storage tank site. Injection to be performed using Geoprobe 7822DT direct push rig with injection tips. An area of 2000 square feet will be treated using 28 injection points and at depth of 10-16 feet bgs. Injection rate will be at ~20 gallons per minute to minimize surfacing. Approximately 3360 pounds of 12% concentrated COGAC will be injected evenly using 7.5-foot grid spacing.

### Injection Site Information

Depth to most shallow groundwater (required): 10 ft  
Existing concentration of total dissolved solids (TDS) in groundwater (required): 1150mg/L  
Location (required): 112 School Road, Hatch, NM  
County (required): Dona Ana  
Latitude: 32.665468  
Longitude: -107.156524  
Map Showing Area of Injection Sites Attached (required):

### Additives Being Used (including volumes, manufacturer, and mixing ratios)

3360 lbs of 12% concentrated COGAC solution. COGAC solution developed by Remington Technologies, Inc. Please see attached the Safety Data Sheet for COGAC ingredients as well as chemical and physical properties.

### Anticipated Precipitation, Dissolution, Adsorption, and Desorption Products

COGAC is a high carbon content chemically oxygenated granular activated carbon. COGAC is a combination of sodium persulfate, calcium peroxide, and activated carbon that provides 3 methods of contaminant concentration reduction: (1) sorption of the contaminants for reduced flux into groundwater, (2) initial in-situ chemical oxidation, and (3) a transition to biological stimulation for indigenous microbes. COGAC can perform under both aerobic and anaerobic conditions. Please see attached SDS for additional product properties and fates.

### Public Notice Posting Locations

2 inch by 3 inch Newspaper Ad required for Renewal applications.

**Newspaper:** N/A

3 inch by 4 inch Newspaper Ad required for New, Modification, and Renewal/Modification applications.

**Newspaper:** Las Cruces Sun News

2 feet by 3 feet sign posted for 30 days in a location conspicuous to the public at or near the facility required for New, Modification, and Renewal/Modification applications.

**Sign Location:** Sign will be posted by the front door of the Halsell Grocery Store.

8.5 inch by 11 inch or larger posted off-site location conspicuous to the public (e.g. public library). Required for New, Modification, and Renewal/Modification applications.

**Flyer Location:** Flyer will be located at the Hatch Public Library.

This UIC Permit consists of the complete and accurate completion of this UIC Permit form as determined by the GWQB.

Issuance of this UIC Permit does not relieve the Permittee of the responsibility to comply with the WQA, WQCC Regulations, and any other applicable federal, state and/or local laws and regulations, such as zoning requirements and nuisance ordinances.

**Signatures**

Signature must be that of the person listed as the legally responsible party on this application.

*I, the applicant, attest under penalty of law to the truth of the information and supporting documentation contained in this application for an Underground Injection Control General Discharge Permit.*

**Applicant's Signature**

Signature:           **Lorena Goerger**            
Digitally signed by Lorena Goerger  
Date: 2021.12.09 10:53:15 -07'00'

Date: \_\_\_\_\_

Printed Name:           Lorena Goerger          

Title:           Program Manager          

**Applicant Note that Submissions Must Include:**

- 1- One electronic copy of the application delivered to the GWQB via email or other format
  
- 2- Two hardcopies of the application delivered to: Ground Water Quality Bureau  
Harold Runnels Building  
1190 Saint Francis Drive  
P.O. Box 5469  
Santa Fe, NM 87502-5469
  
- 3- Payment by check or electronic transfer of one application fee of \$100.00

## II. FINDINGS

In issuing this UIC Permit, GWQB finds:

1. The Permittee is injecting fluids so that such injections will move directly or indirectly into groundwater within the meaning of Section 20.6.2.3104 NMAC.
2. The Permittee is injecting fluids so that such fluids will move into groundwater of the State of New Mexico which has an existing concentration of 10,000 mg/L or less of TDS within the meaning of Subsection A of 20.6.2.3101 NMAC.
3. The Permittee is using a Class V UIC well as described in 20.6.2.5002(B)(5)(d)(ii) NMAC for in situ groundwater remediation by injecting a fluid that facilitates vadose zone or groundwater remediation.
4. The Permittee is injecting fluids into groundwater in order to achieve the remediation goals identified in the Injection Plan.

## III. AUTHORIZATION TO DISCHARGE

The Permittee is authorized to inject chemical additives into groundwater in accordance with this UIC Permit and the Injection Plan under the oversight of the NMED Petroleum Storage Tank Bureau.

[20.6.2.3104 NMAC, Subsection C of 20.6.2.3106 NMAC, Subsection C of 20.6.2.3109 NMAC]

## IV. CONDITIONS

The conditions of this UIC Permit shall be complied with by the Permittee and are enforceable by GWQB.

1. The Permittee shall perform remediation activities in accordance with the Injection Plan and shall notify GWQB of any changes prior to making them.

[20.6.2.3107 NMAC]

2. The Permittee shall monitor the injection activities and their effects on groundwater quality as required by the Injection Plan and shall provide GWQB with electronic copies of the required reporting and any pertinent documentation of activities at the site.

[20.6.2.3107.A NMAC, 20.6.2.3109.A NMAC]

3. If the GWQB or the Permittee identifies any failure of the Injection Plan or this UIC Permit to comply with 20.6.2 NMAC not specifically noted herein, GWQB may require the Permittee to submit a corrective action plan and a schedule for completion of corrective actions to address the failure.

Additionally, the GWQB may require the Permittee to submit a proposed modification to the Injection Plan, this UIC Permit, or both.

[20.6.2.3107.A NMAC, 20.6.2.3109.E NMAC]

4. ADDITIONAL MONITORING REQUIREMENTS – (RESERVED) - Placeholder for any added monitoring and reporting requirements.
5. TERMINATION – Within 30 days of completion of activities authorized by this UIC Permit the Permittee shall submit a closure report and a request to terminate the UIC Permit to the GWQB for its approval. The closure report shall identify how the injection well(s) was (were) closed in accordance with the Injection Plan. The Permittee shall provide [all parties](#) with a copy of this closure report.

[20.6.2.5005 NMAC, 19.27.4 NMAC]

6. INSPECTION and ENTRY – The Permittee shall allow a representative of the NMED to inspect the facility and its operations subject to this UIC Permit and the WQCC regulations. The GWQB representative may, upon presentation of proper credentials, enter at reasonable times upon or through any premises in which a water contaminant source is located or in which are located any records required to be maintained by regulations of the federal government or the WQCC. The Permittee shall allow the GWQB representative to have access to, and reproduce for their use, any copy of the records, and to perform assessments, sampling or monitoring during an inspection for the purpose of evaluating compliance with this UIC Permit and the WQCC regulations.

Nothing in this UIC Permit shall be construed as limiting in any way the inspection and entry authority of GWQB under the WQA, the WQCC Regulations, or any other local, state, or federal regulations.

[20.6.2.3107.D NMAC, NMSA 1978, §§ 74-6-9.B and 74-6-9.E]

7. MODIFICATIONS and/or AMENDMENTS – In the event the Permittee proposes a change to the injection plan that would result in a change in the volume injected; the location of the injections; or the concentration of the additives being injected by the facility, the Permittee shall notify GWQB prior to implementing such changes. The Permittee shall obtain approval (which may require modification of this UIC Permit) by GWQB prior to implementing such changes.

[20.6.2.3107.C NMAC, 20.6.2.3109.E and G NMAC]

8. COMPLIANCE with OTHER LAWS – Nothing in this UIC Permit shall be construed in any way as relieving the Permittee of the obligation to comply with all applicable federal, state, and local laws, regulations, permits, or orders.

[NMSA 1978, § 74-6-5.L]

9. PERMIT FEES – Payment of permit fees is due at the time of UIC Permit approval. Permit fees shall be paid in a single payment remitted to GWQB no later than 30 days after the UIC Permit effective date.

Permit fees are associated with issuance of this UIC Permit. Nothing in this UIC Permit shall be construed as relieving the Permittee of the obligation to pay all permit fees assessed by GWQB. A Permittee that ceases injecting or does not commence injecting during the term of the UIC Permit shall pay all permit fees assessed by GWQB. An approved UIC Permit shall be suspended or terminated if the facility fails to remit a payment by its due date.

[20.6.2.3114.F NMAC, NMSA 1978, § 74-6-5.K]