dhec

Healthy People. Healthy Communities.

Former Vermont Bosch Site Cleanup

Public Meeting
September 8, 2022

Former Vermont Bosch
PUBLIC MEETING

- To avoid echoing or feedback, all lines are muted.
- At the end of the presentation, we will unmute and call upon those who signed up to speak.
- This virtual meeting will be recorded and posted on our webpage.

Counties with HIGH IMPACT from COVID-19

Individuals who live or visit these counties should assess their risk for COVID-19 and take the appropriate prevention steps as recommended by both the CDC and DHEC.

Visit the CDC and DHEC's websites for more information about COVID in your county.

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HIGH

Wear a mask indoors in public.

Stay up to date with COVID-19 vaccines.

Get tested if you have symptoms.

Additional precautions may be needed for people at high risk for severe illness.

Option to Call In

If you are experiencing audio problems, join the virtual hearing by phone:

Phone number: **1 (864) 558-7311**
Access Code: **222 969 015#**

Exits the hearing. (If you accidentally exit the hearing, you can rejoin.)

Agenda

- Gathering Time and Instructions for Participating Remotely
- Opening Remarks
- DHEC Overview of Proposed Plan for Site Remediation
- Questions & Discussion
- Closing Remarks
- Meeting Adjourned

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Former Vermont Bosch
800 Woodside Avenue
Fountain Inn, South Carolina

Proposed Plan Presentation

Presentation Overview

- Proposed Plan: Why Are We Here?
- Brief Site History
- Discussion of Cleanup Alternatives
- DHEC's Preferred Cleanup Alternative

Public Comment Period: September 8, 2022 to October 10, 2022

Proposed Plan

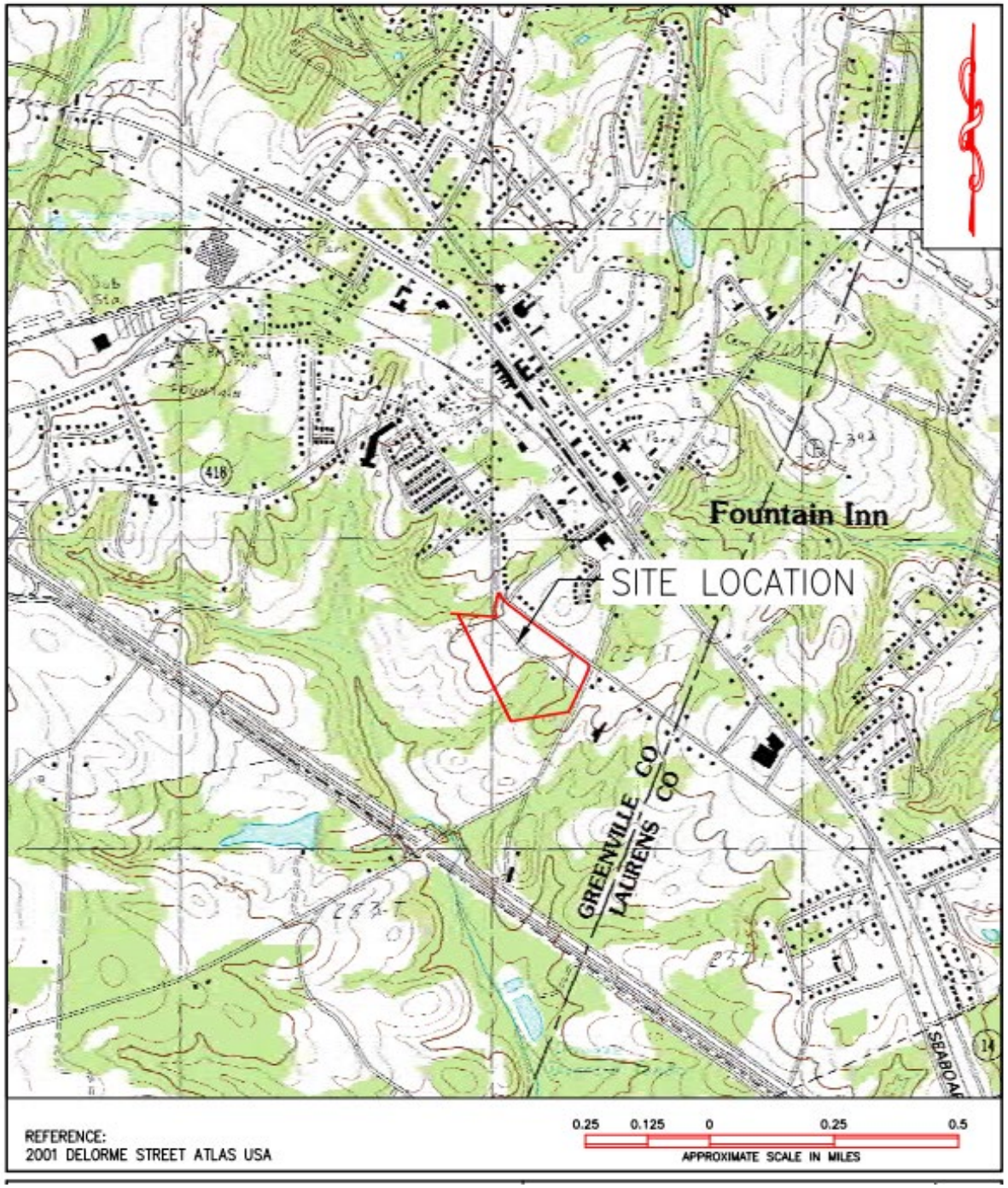
- DHEC has completed an evaluation of cleanup alternatives presented in the Feasibility Study to address contamination at the site.
- The Proposed Plan identifies DHEC's Preferred Clean-up Alternative and the reasoning for this preference.
- The Proposed Plan includes summaries of all cleanup alternatives that were evaluated.

Purpose of the Proposed Plan

- Inform everyone of activities at the Site
- Gain public input and comments
- Fulfill the requirements of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and the National Oil and Hazardous Substances Pollution Contingency Plan (NCP)

Public Comment Period

- Public Comment period: September 8, 2022 to October 10, 2022
- DHEC will select the final cleanup remedy after reviewing and considering comments.
- DHEC may modify the Preferred Alternative or select another response action based on new information or public comments.
- Public encouraged to review and comment on all the Alternatives presented.



Former Vermont Bosch Site Location

800 Woodside Avenue Fountain Inn, SC

Site Ownership History

- 1985 -Began operations as Rosco Tools, a division of Vermont American Corporation.
- 1989- Vermont American Corporation is purchased by Bosch Group and Emerson Electric.
- 2001- Bosch buys out Emerson stake in Vermont American Corporation and forms Robert Bosch Tools.
- 2005- Sold to Fountain Inn Investments LLC
- 2008 – Purchased by Stevens Andrew E Trustee
- 2012 -Purchased by Wirthwein Real Estate LLC and operated by South Carolina Plastics LLC

Contaminants of Concern (COCs)

- Tetrachloroethene (PCE)
- Diethylphthalate, chloroform, methylene chloride, and various polycyclic aromatic hydrocarbons (PAHs).

History of Assessment and Remediation

1996-2005

- Various phases of assessment for soil and groundwater.

2005

- Vermont Bosch entered into a Voluntary Cleanup Contract with the Department.

2016-2018

- Remedial Investigation (RI) included soil assessment and installation of groundwater monitoring wells. And site wide groundwater sampling event.

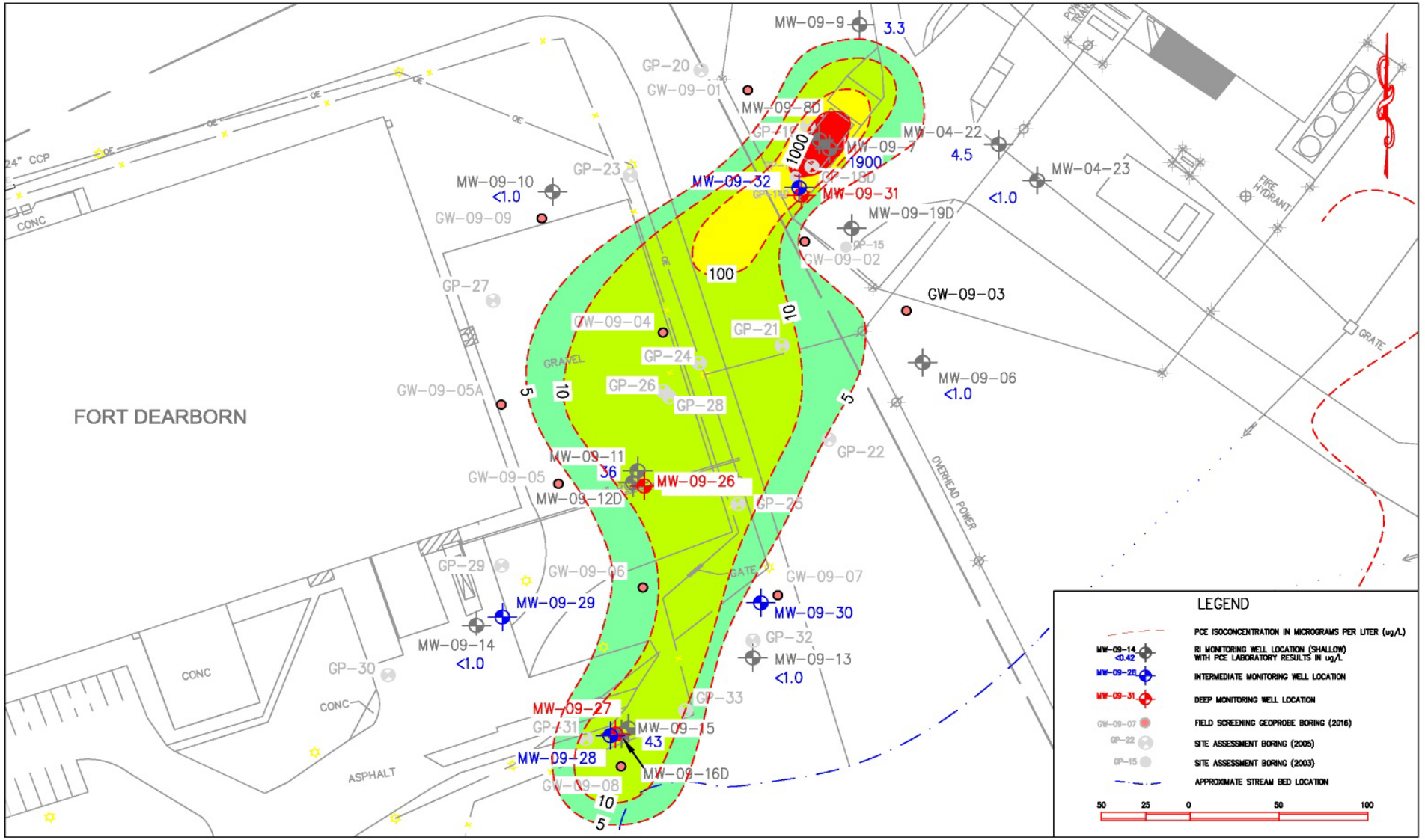
2020

- Feasibility Study and revisions.

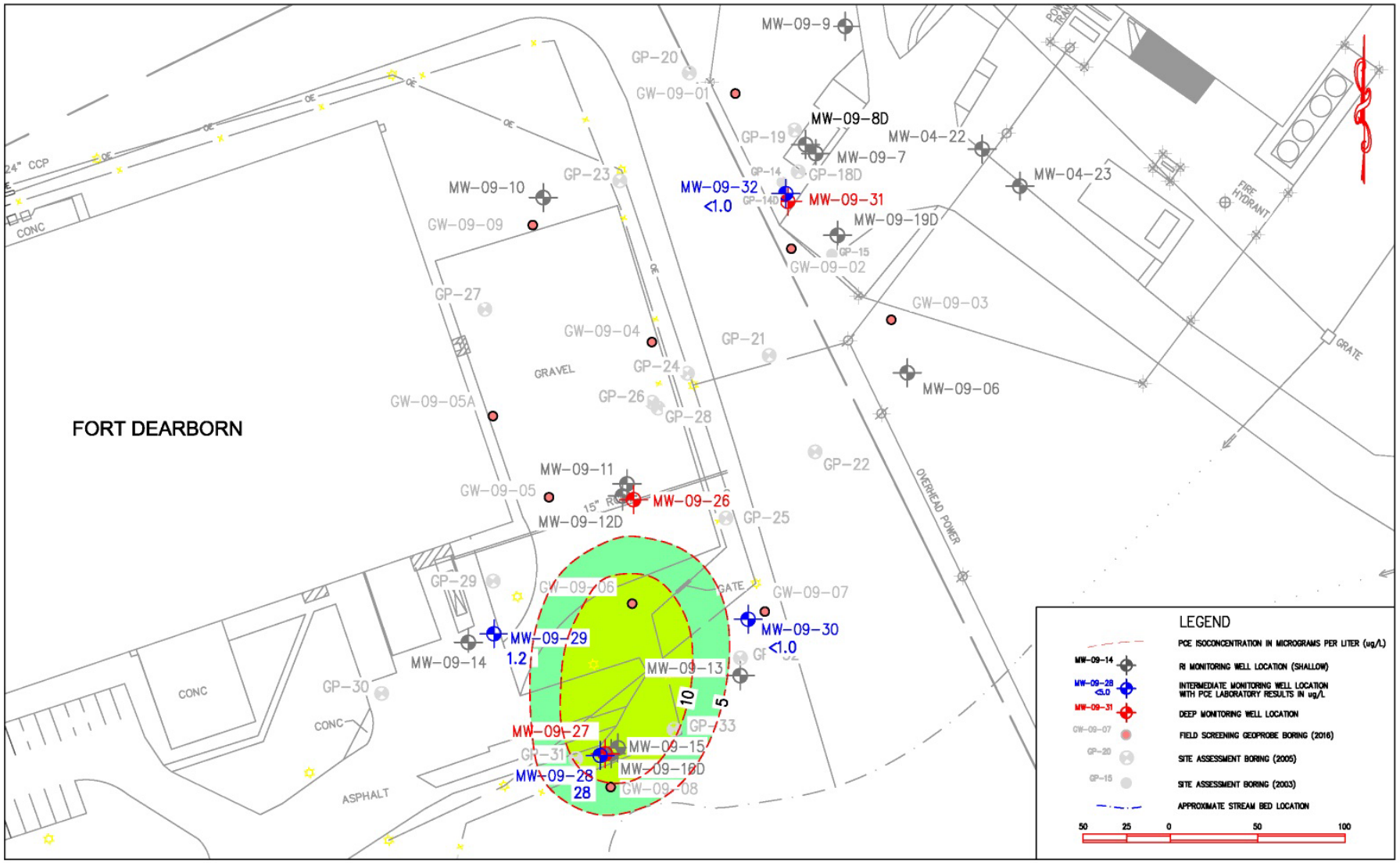
Area of Concern

- Former Hazardous Waste Accumulation Building located southwest of the facility building is the main area of concern. The Building contained various hazardous and non-hazardous wastes such as chlorinated solvents, paints, inks, thinners, and plasticizers.
- PCE was detected in groundwater and soil at this location.
- PCE concentrations in groundwater significantly exceed MCLs.

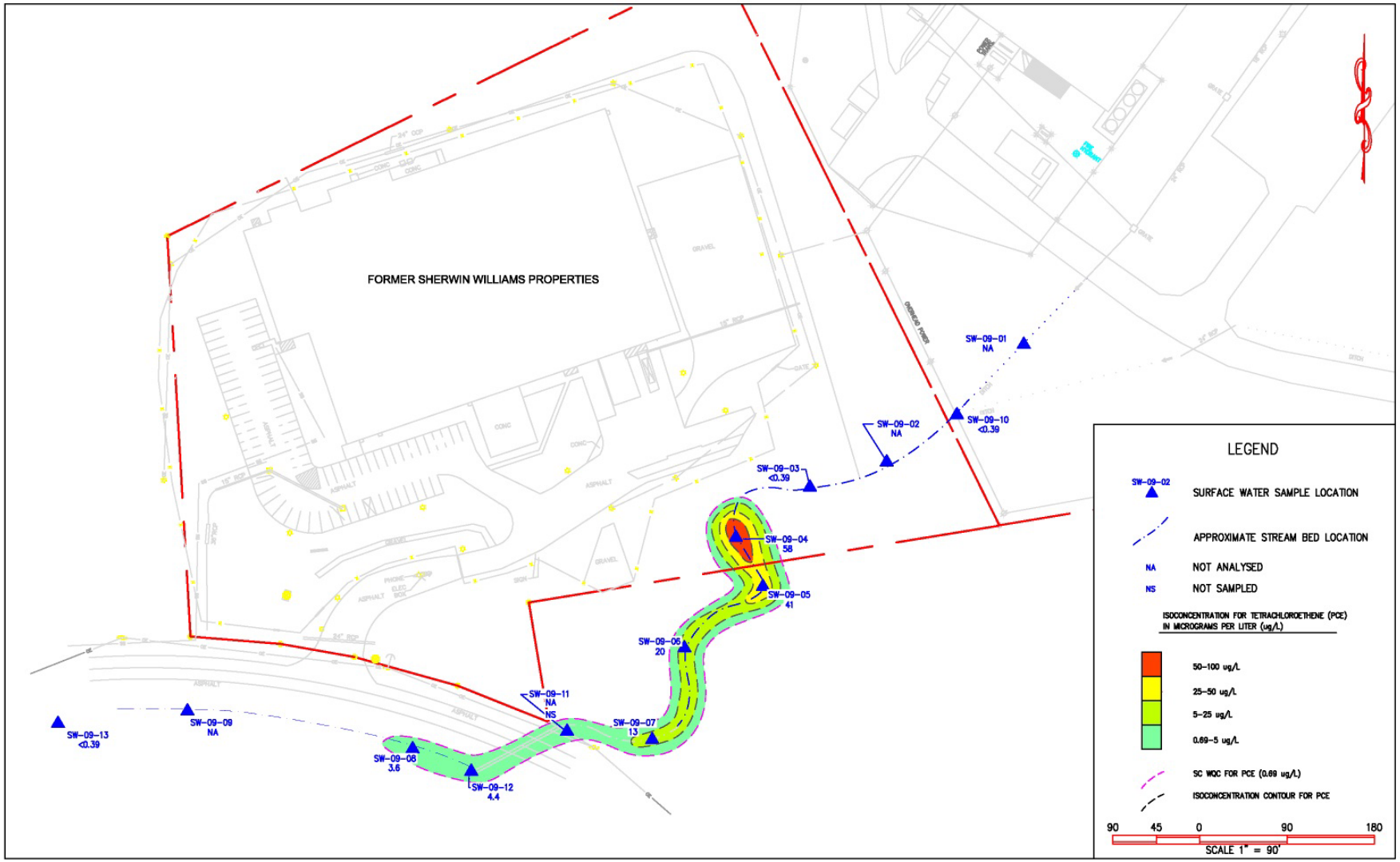
Shallow Groundwater Contamination



Intermediate and Deep Groundwater Contamination



Surface Water Contamination



DRAWN BY: ZJD	DATE: 10/28/15	REVISIONS			wood.	30 PATEWOOD DRIVE SUITE 200 GREENVILLE, S.C. 29615 Phone: (864) 458-3600 Fax: (864) 459-3700	PCE-IMPACTED SURFACE WATER MAP RBTC FOUNTAIN INN DIVISION/FORMER SHERWIN WILLIAMS PROPERTIES FOUNTAIN INN, SOUTH CAROLINA	FIGURE 2.6
CHECKED BY: PSJ	DATE: 10/28/15	No.	DESCRIPTION	BY				
PROJECT NO: 6251161022.04.02								

Cleanup Goals

- Prevent leaching of soil contamination to groundwater.
- Prevent exposure of human receptors to contaminated groundwater.
- Restore groundwater to Environmental Protection Agency (EPA) Maximum Contaminant Levels (MCLs) MCLs.
- Mitigate further migration of groundwater contamination to surface water.

Clean Up Alternatives

Alternative 1	No Action
Alternative 2	Soil Vapor Extraction and Air Sparging with In-Situ Chemical Reduction using Zero Valent Iron
Alternative 3	In-Situ Chemical Oxidation Blending and In-Situ Chemical Reduction using Zero Valent Iron
Alternative 4	Soil Excavation, In-Situ Chemical Oxidation Blending and In-Situ Chemical Reduction using Zero Valent Iron

Alternative 1: No Action

- Required by the National Contingency Plan (baseline comparison to other alternatives)
- No active treatment
- No monitoring
- Cost $0

Alternative 2: Soil Vapor Extraction and Air Sparging with In-Situ Chemical Reduction using Zero Valent Iron

- Soil vapor extraction for soil contamination
- Air sparge wells for groundwater and saturated soil contamination
- In-situ chemical reduction using zero valent iron for groundwater contamination remediation
- Cost $611,000

Alternative 3: In-Situ Chemical Oxidation Blending and In-Situ Chemical Reduction using Zero Valent Iron

- In-situ chemical oxidation of vadose zone soil for shallow and deeper treatment zones
- Stabilization of treatment zones using Portland cement
- In-situ chemical reduction using zero valent iron for groundwater contamination
- Costs $489,500

Alternative 4: Soil Excavation with In-Situ Chemical Oxidation and In-Situ Chemical Reduction using Zero Valent Iron

- Concrete slab removal and soil excavation
- In-situ chemical oxidation soil blending using potassium permanganate
- In-situ chemical reduction using zero valent iron for groundwater remediation
- Costs $539,000

Evaluation Criteria

1. Overall Protection of Human Health and the Environment;
2. Compliance with State & Federal Regulations;
3. Long-Term Effectiveness and Permanence;
4. Reduction of toxicity, mobility, or volume through treatment;
5. Short-Term Effectiveness;
6. Implementability;
7. Cost; and
8. Community Acceptance

Overall Protection of Human Health and the Environment

- Alternative 1 (No Action) does not achieve the remedial action objective.
- Alternative 2 , 3 and 4 include treatment of soil and groundwater and/or elimination of source material using various technologies.
- Alternatives 2-4 protect human health and the environment at a similar level.

Compliance with State and Federal Regulations

- Alternatives 1 does not meet regulatory limits.
- Alternatives 2, 3 and 4 would comply with regulatory limits within various time frames.
- Alternative 2 may require additional permitting or monitoring for the air sparging system.

Long Term Effectiveness and Permanence

- Alternative 1 does not provide long term effectiveness and permanence.
- Alternatives 2 through 4 use various technologies to treat source area contaminated soil that would leach to groundwater.
- Alternatives 2 through 4 treat contaminated groundwater migrating to the unnamed tributary.

Reduction of Toxicity, Mobility, or Volume Through Treatment

- Alternative 1 does not result in a reduction of toxicity, mobility, or volume of contamination.
- Alternatives 2, 3 and 4 reduce toxicity and mobility of contamination using similar techniques in addition to preventing future discharge of contamination to the unnamed tributary.

Short-Term Effectiveness

- Alternative 1 does not include any actions which might create increased risk to the community, workers, or the environment.
- Alternatives 2 and 3 use similar technologies to treat soil and groundwater contamination. The SVE/AS treatment system and ZVI materials may provide exposure to workers during system installation.
- Alternative 4 includes excavation and disposal of contaminated soil which may potentially expose workers to contaminants during construction and transport activities. Oxidant and ZVI material injections may also provide exposure to workers.

Implementability

- Alternative 1 does not involve construction, operation, or maintenance of a remedial system.
- Alternatives 2 through 4 require injection of amendments and excavation/disposal, all of which have been successfully used to remediate similar sites in similar geologic settings.

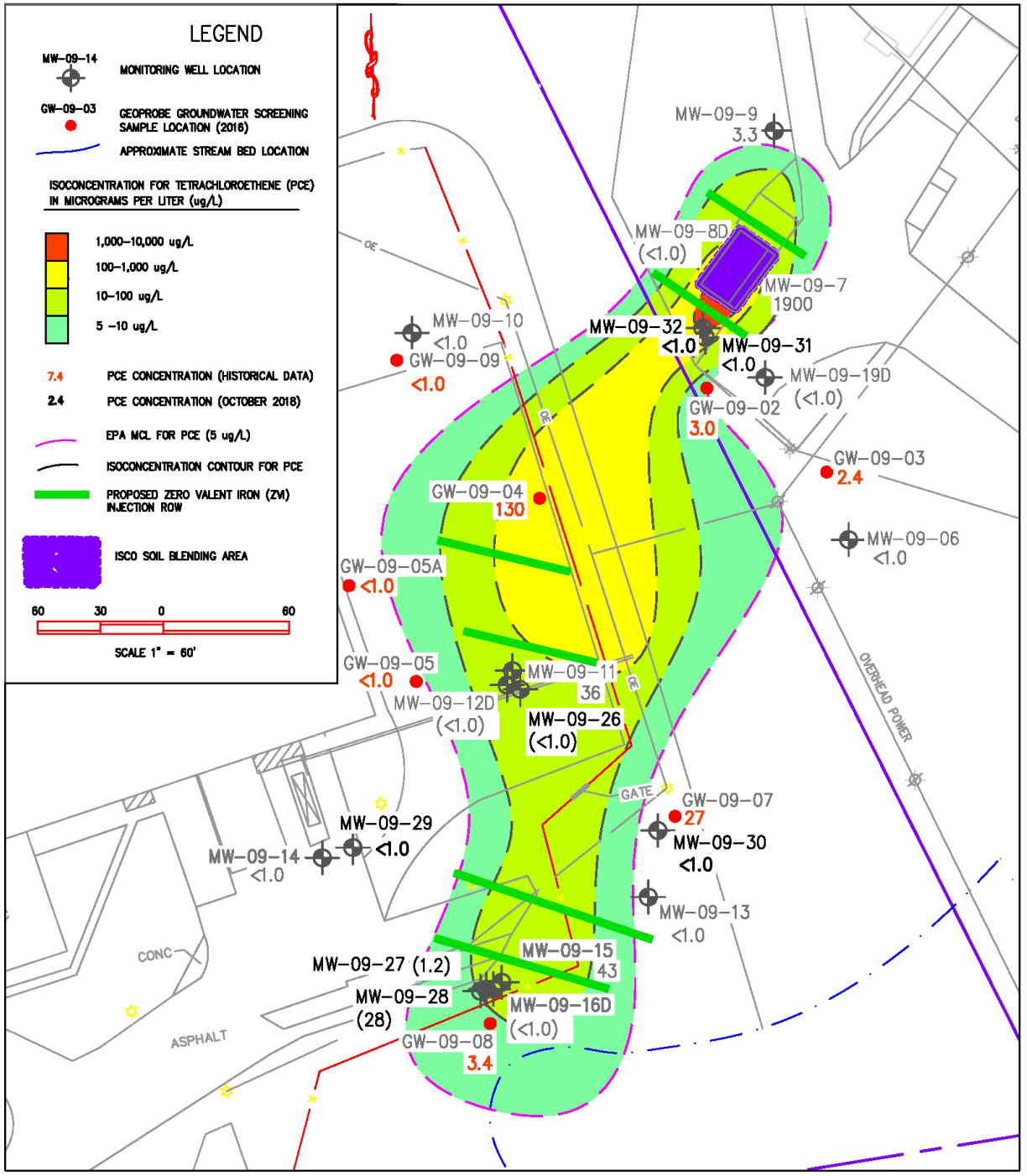
Remedial Alternatives	1	2	3	6
Criterion	No Action	SVE/AS and ISCR with ZVI	Excavation and Disposal w/ MNA/ICs	Excavation & Disposal & In Situ Chemical Oxidation w/ MNA/ICs
Overall Protection of Human Health and the Environment	**1**	**5**	**5**	**5**
Compliance with Applicable Federal, State, and Local Regulations	**1**	**4**	**5**	**5**
Long-Term Effectiveness and Permanence	**1**	**3**	**4**	**3**
Reduction of Toxicity, Mobility, and Volume	**1**	**5**	**5**	**5**
Short-Term Effectiveness	**1**	**5**	**6**	**6**
Implementability	**6**	**5**	**4**	**4**
Cost	**6**	**2**	**5**	**3**
Total Score	**17**	**29**	**34**	**31**

Alternatives ranked from 1-6 based off their effectiveness for each category. Highest total score is considered the best alternative for each media.

DHEC's Preferred Cleanup Alternative

Alternative 3: In-Situ Chemical Oxidation (ISCO) Soil Blending and In-Situ Chemical Reduction using ZVI

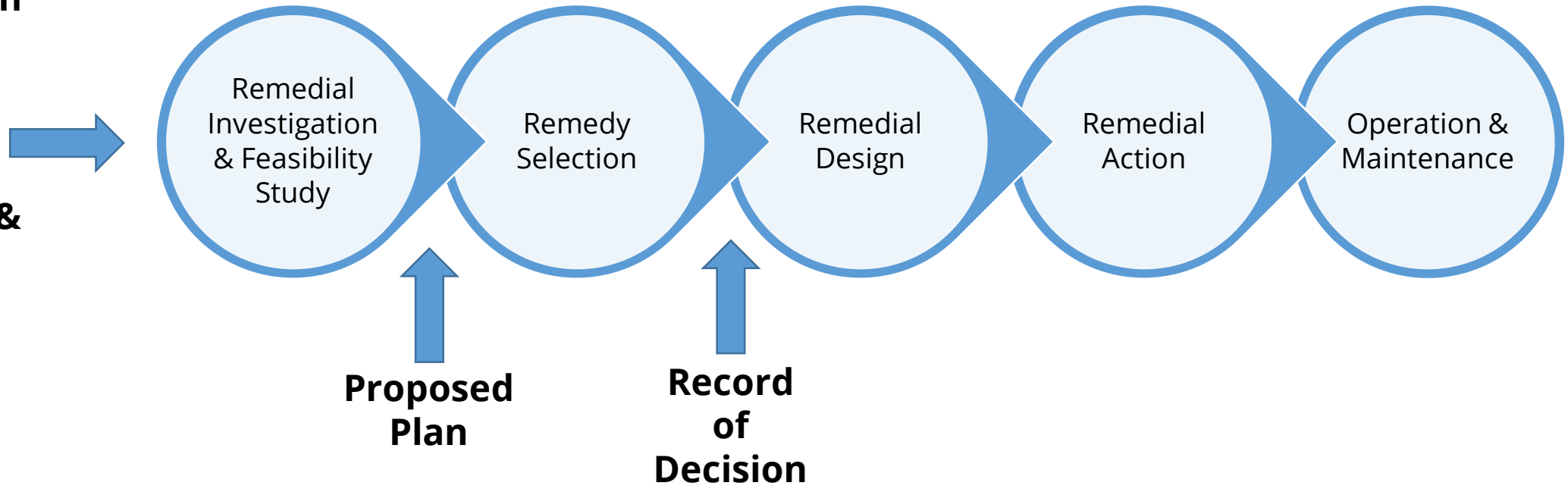
- Remove the concrete pad overlying the former hazardous waste accumulation building.
- Soil from 0 to 10 feet below ground surface removed and stockpiled.
- ISCO soil blending with potassium permanganate within the 10 ft to 25 ft treatment zone followed by stabilization with 5% Portland cement.
- ISCO soil blending with potassium permanganate within the 0 to 10 ft zone followed by stabilization.
- ZVI injected into borings installed in rows perpendicular to the groundwater contaminant plume.



Alternative 3
In-situ Chemical Oxidation Soil Blending and In-situ Chemical Reduction with Zero Valent Iron

Next Steps

Vermont Bosch voluntarily agrees to conduct Remedial Investigation & Feasibility Study (RI/FS)



- Public Comment Period – Evaluates Community Acceptance of DHEC's Preferred Alternative.
- Record of Decision – Identifies Selected Remedy after Review of Public Comments.
- Remedial Design – Development of a Plan to Construct and Implement the Selected Remedy.

Administrative Record Available at:

www.scdhec.gov/FormerVermontBosch

Fountain Inn Public Library
311 North Main Street
Fountain Inn, South Carolina
(864) 862-2576

Hours:
Mon-Tue 9am-9pm
Fri-Sat 9am-6 pm
Sun closed

Comments

Written comments may be submitted by mail or email through

October 10, 2022

to:

Cynde Devlin
DHEC/BLWM
2600 Bull Street
Columbia, SC 29201
devlincl@dhec.sc.gov

Additional information can be found at:

www.scdhec.gov/FormerVermontBosch

How to Participate

To indicate you would like to speak:

- Unmute your line
- Click the 'Hand Raise' icon

Hand Raise
(click this icon to indicate you would like to speak)

Muted
(no one in the meeting can hear you)

Unmuted
(everyone in the meeting can hear you)

If you have called into the meeting, press *6 to unmute

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