

Long Term Stewardship RCRA Corrective Action

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Why Do We Need Long Term Stewardship?



Any site with contamination above unrestricted use will have some kind of control(s) and will need long term stewardship to ensure the controls remain protective of human health and the environment until risk-based levels that allow unrestricted use are achieved



Why Do We Need Long Term Stewardship?

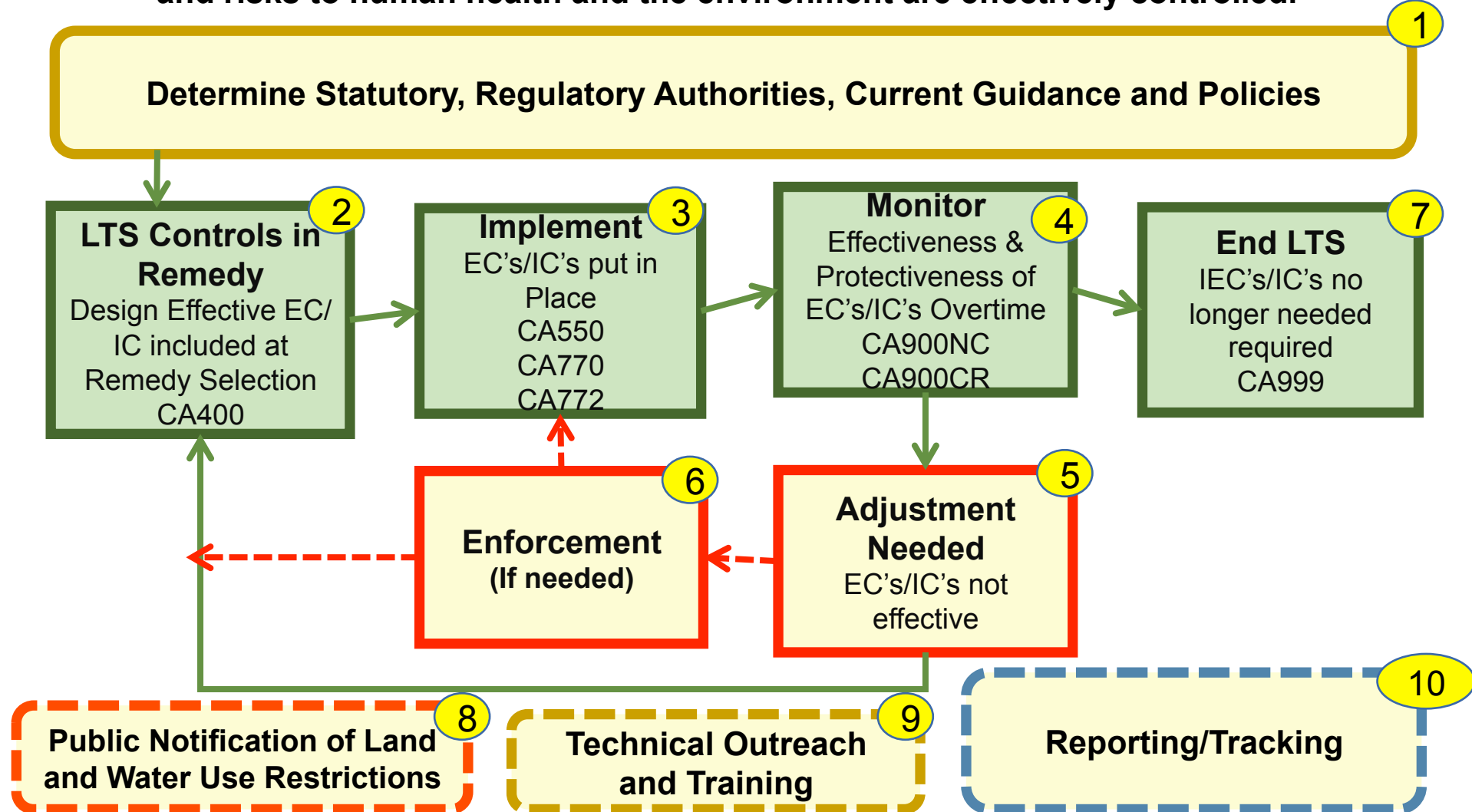
- Different owner / operator than during remedy phase
- Property maintenance ceased after bankruptcy
- Unanticipated change from Industrial to Residential use
- Components of Remedy not maintained (monitoring wells, caps etc.)
- Unreported releases at facilities with remedy constructed
- Enforceability of old IC's
- Opportunity to reevaluate the effectiveness of Remedy and potentially accelerate reaching cleanup complete
- Public and worker safety
- Protecting ground water and drinking water through monitoring
- Assuring local, state and federal oversight of clean-up sites with IC's/ EC's and active remedies

EPA and States Responsibility under RCRA

- **Develop and implement an effective site monitoring process.**
- **Make information on IC's and EC's, including the status of the facility's remedy and its progress towards meeting the performance standards, readily available to the public.**
- **Work with site owners to track and prevent and address failures of remedy components either collaboratively or, if needed, by enforcement tools.**

LTS Process Considerations

To ensure RCRA Corrective Action properties remain protective over time and risks to human health and the environment are effectively controlled.



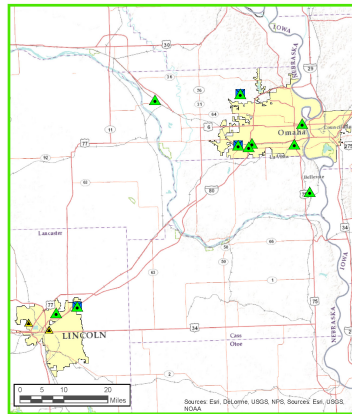
LTS Considerations – Current Focus

- **Design Effective LTS approach** – including EC/IC's, at remedy decision or corrective measure study. Identify if there will be contamination left in place, anticipated future use, and a package of EC's and IC's that will be effective for that particular facility (considering State and local laws, etc.) Enforcement tools-UECA, AOC & CALTA.
- **Monitor effectiveness and protectiveness of EC's/IC's over time** – Which organization oversees facilities in LTS phase, inspections, use of mapping for inspections, other oversight tools (e.g., annual certification that IC's and EC's are in place and operating).
- **Program Measurement / Tracking** – Determine the universe of facilities in LTS and how to manage records/activities for these facilities in databases.

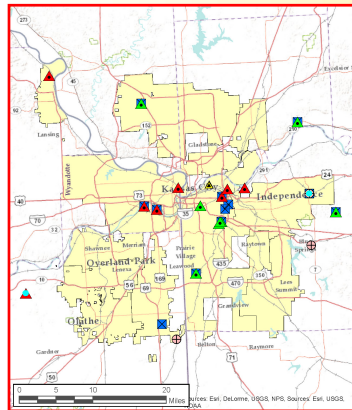
Potential LTS Components

- **Long Term Controls in Remedy:** LTS language built into remedy selection
- **Implementation**
 - Financial assurance in place for long term O&M
 - Engagement with local government
 - GIS locations & boundaries of controls and use restrictions
- **Monitor / Maintenance**
 - Annual certification by O/O that controls remain in place & effective
 - Regular agency reviews and site visits (e.g., five year review)
 - Tracking of EC/IC components
 - Prioritizing sites (e.g., GW plumes, potential Vapor Intrusion)
- **Enforcement:** Ensure controls are, and remain enforceable
- **Public Notification** of controls and use restrictions
 - Mapping site boundaries and IC's / EC's
 - Monitoring remedy results (e.g., GW monitoring, plume stability)

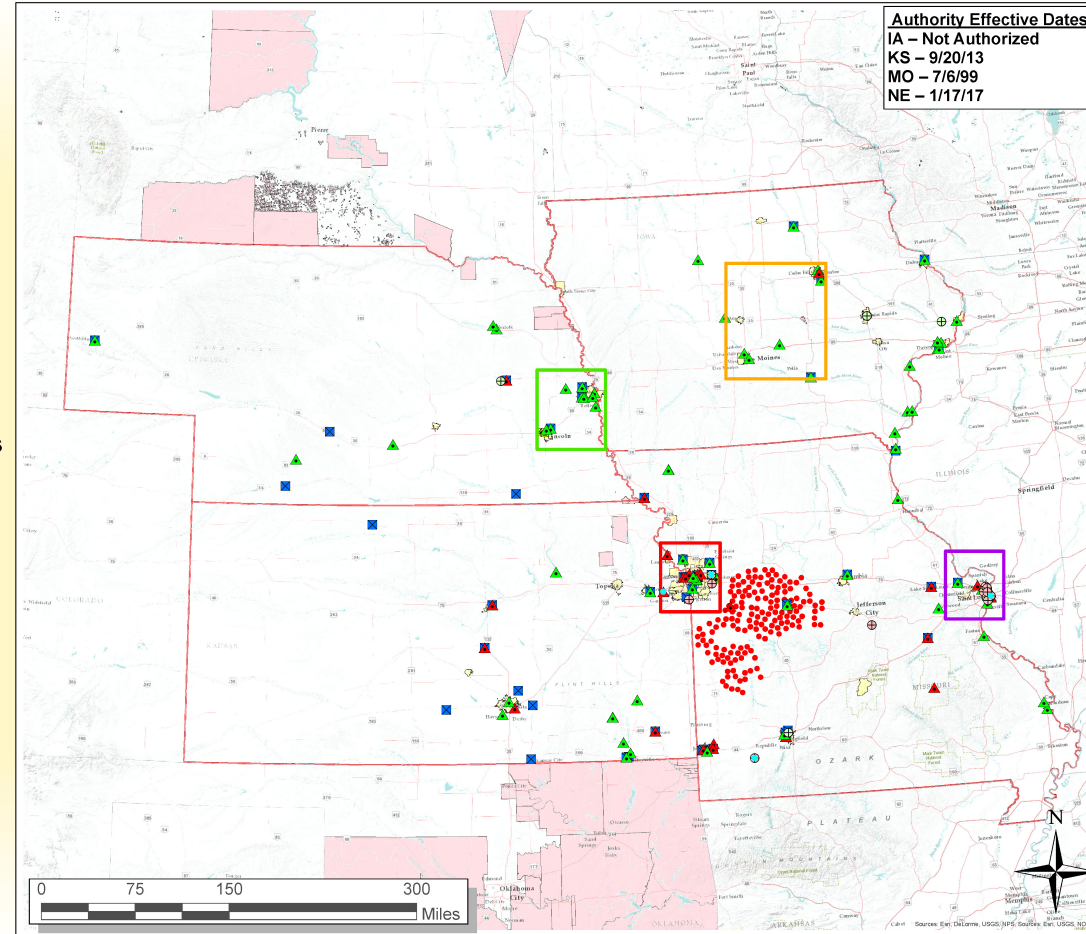
Region 7 RCRA CA LTS Universe



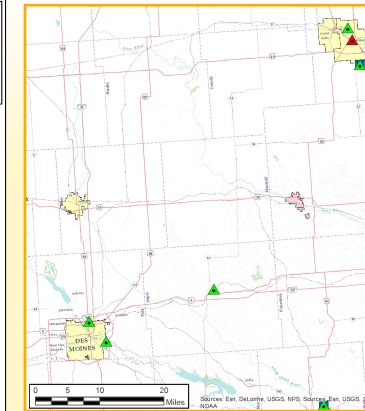
Omaha/Lincoln Metro Areas



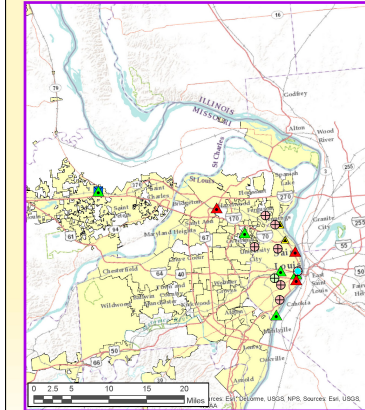
Kansas City Metro Area



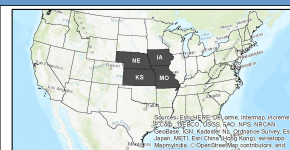
Authority Effective Dates:
IA – Not Authorized
KS – 9/20/13
MO – 7/6/99
NE – 1/17/17



Des Moines/Waterloo Metro Areas



St. Louis Metro Area



EPA Region 7

2020 Universe

- ▲ Remedy Constructed (CA550 Achieved) (71)
- ▲ Remedy Constructed Not Achieved (26)

Non-2020 Universe

- ⊕ Remedy Constructed (CA550 Achieved) (5)
- ⊕ Remedy Constructed Not Achieved (16)

- Post Closure Universe (50)
- ▲ TSCA/PCB Facilities with Controls (11)
- Minute Man II Sites (156)

- Region 7 State Boundaries

- City Boundary
- Tribal Nations



Notes: Data updated in December 2017.

Case Study - Region 7

Conditions in 2016 after placement of 2011 Environmental Covenant restricting land use



2016
LTS Assessment

Conditions in 2016 in compliance with land use restrictions



Parcel Re-zoned
for Residential
use!!!



Work with Local
Government to
reverse zoning to
non-residential use

Iowa Department of Natural Resources	
Abandoned Monitoring Well Plugging Record	
1. Owner: <u>Coastal Properties Holding, LLC</u> City: <u>Omaha</u> State: <u>Iowa</u>	
Address: <u>405 N. 11th Street #100</u> Zip: <u>51504</u> Phone: <u>(402) 399-0049</u>	
Name: <u>Angela Ertich</u>	
Number: <u></u>	
2. Well Location: <u>1/4 of, sec 14 of, Section 33, Twp 28 N, Range 68, West 10th Ave and Scott</u> County: <u>Scott</u> Describe well location on property: <u></u>	
3. Description:	
Well depth: <u>24.5 ft.</u>	Casing material: <u>steel</u> <input checked="" type="radio"/> concrete, <u>brick</u> , <u>stone</u>
Depth to water: <u>10 ft.</u>	(circle one)
Casing diameter: <u>2.0 ft.</u>	Type of construction: <u>drilled</u> , <u>driven</u> , <u>braced</u> , <u>augered</u>
Year of casing: <u>1980</u>	(circle one)
Check <input type="checkbox"/> if this is a Monitoring Well	Well ID: <u>1D</u>
I certify this well has been plugged per Iowa rule 567-39.8 of the Iowa Administrative Code (IAC). I agree to provide any additional information the owner or department may need concerning this well.	
Signature of Owner: <u>[Signature]</u> Date Plugged: <u>9-13-16</u>	
I have plugged this well as required by rule 567-39.8 of the Iowa Administrative Code (IAC).	
Signature of Contractor: <u>[Signature]</u> Cert. No.: <u>19716</u>	
OR, if plugged by well owner, complete this box:	
This property owner has plugged this well following requirements in rule 567-39.8 of the Iowa Administrative Code with the oversight and assistance of the designated County Agent.	
Signature of County Agent: <u></u> Date Approved: <u></u>	
Eligible for Grants to Counties cost share: <input type="checkbox"/> YES <input type="checkbox"/> NO (Determined by County Agent)	
Complete one form for each well plugged and submit within 30 days to:	
Hutton Jackson 444E Center Street 501 East 4th Street Des Moines, IA 50319	

EPA Region 7 LTS Database and Tracking Tool

- Objective: Develop LTS Interactive Database/Mapping System for management and tracking of controls
- Part of Regional RCRA CA LTS Program effort to:
 - Ensure facilities are compliant with land use controls
 - Ensure engineering controls are effectively mitigating exposure to residual contamination
 - Ensure facilities are in compliance with monitoring requirements (periodic activities and sampling, groundwater plume migration)
 - Periodic report tracking (quarterly, annual, 5-year reviews)

**EPA Region 7
Long-Term Stewardship
Database and Tracking Tool**

DEMONSTRATION

Case Study - Region 1

- LTS assessment conducted
- Opportunity to revisit site conceptual model, containment system capability, and potential VI concerns
- Collaboration with state agency
- Outcome: site remedy continues to be protective of human health and the environment



Case Study - Region 1

Post Clean-up/Redevelopment Concerns

- Change in Activity Use Restrictions
- Daycares
- Residential
- Potential VI



R1 Tools in Development

Striving for all electronic work flow

Tools

- Survey 1,2,3
- Arc Collector
- Geoplatform Mapping
- R1 RCRA CA Access database
- Tablet

Current effort (Total 12-28hrs)

- File review and communication with facility and state (5-15 hrs)
- Site visit/Assessment (2-3 hrs)
- Finalizing checklist (5-10 hrs)

Potpourri

- Renewable Energy
- Climate Change

The screenshot shows a web-based form titled "RCRA CA Assessment Checklist" with a green header. The form is divided into several sections. The "FACILITY DETAILS" section includes fields for Facility Name (Harper Leader Inc.), Facility Address (1046 South Main Street (Leanne)), City (Waterbury), State (CT), EPA ID (CTD001166008), and a Signature field with a handwritten signature. Below this is "PART I. PRE-ASSESSMENT CHECKLIST", which includes fields for Date Pre-Assessment completed (Monday, April 10, 2017), Pre-Assessment performed by (Name) (SDR), and Organization (EPA Region 1). The "A. Background Document Review" section contains three numbered items, each with radio button options for Yes, No, or Other, and a date field for the determination. Item 1 is "Current Human Exposures Under Control (CA 725)?", Item 2 is "Migration of Contaminated Groundwater Under Control (CA 750)?", and Item 3 is "Final Remedy Decision Achieved (CA 400)?". The form has a green footer bar with a white checkmark icon.

Survey123 for ArcGIS

RCRA CA Assessment Checklist

Survey Version:
1

FACILITY DETAILS

Facility Name: *
Harper Leader Inc.

Facility Address: *
1046 South Main Street (Leanne)

City: *
Waterbury

State: *
CT

EPA ID: *
CTD001166008

Signature: *
SDR

PART I. PRE-ASSESSMENT CHECKLIST

Date Pre-Assessment completed: *
Monday, April 10, 2017

Pre-Assessment performed by (Name): *
SDR

Organization: *
EPA Region 1

A. Background Document Review

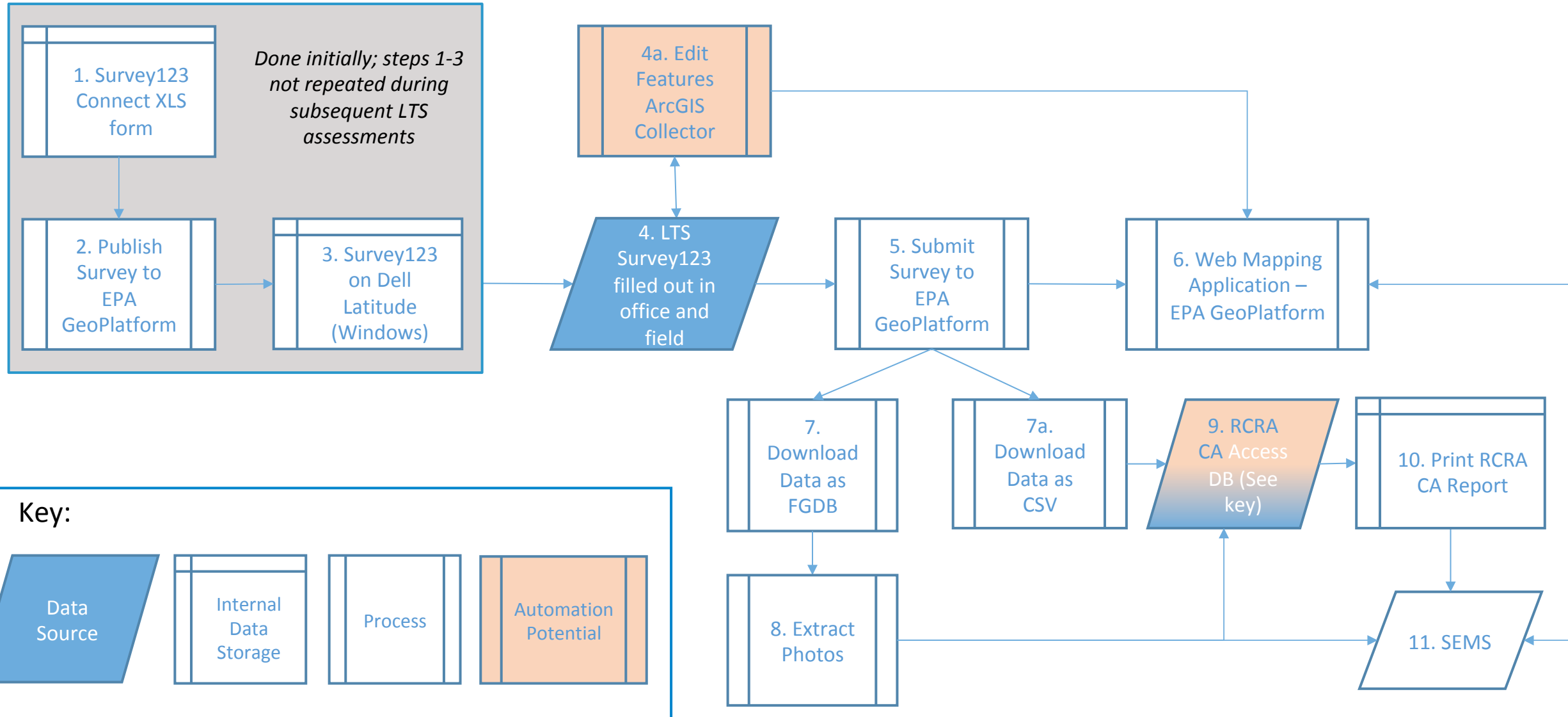
Prior to the site visit, review the following documents. Indicate **status** or if **achieved**.

1. Current Human Exposures Under Control (CA 725)? *
☒ Yes ☐ No ☐ Other
Date of CA725 Determination
9/30/2021

2. Migration of Contaminated Groundwater Under Control (CA 750)? *
☒ Yes ☐ No ☐ Other
Date of CA750 Determination
9/30/2020

3. Final Remedy Decision Achieved (CA 400)? *

R1 Tools in Development – Electronic Workflow



R1 TOOLS IN DEVELOPMENT

Survey123 for ArcGIS

RCRA CA Assessment Checklist

Use this section for site-specific assessment findings on the ICs identified in Parts I and II.

1 of 1

A. Basic Information
[Launch ArcGIS Collector to edit features](#)

Facility ID
CTD001166008

1. Common name of this IC? (ex. "Parking Lot A deed restriction") *

Site Wide AUL

2. What type of IC is this? (Select from drop-down list or write-in) *

Government

2a. Please specify the respective IC Category: *

Groundwater use restrictions

2b. Please specify the IC Mechanism: *

Lease Restriction

3. Is a map of this IC available?(If Yes, please attach) *

☐ Yes ☒ No

4. Is a copy of the IC document (e.g. copy of a deed restriction) available at the site, municipality, state, or on-line? (If Yes, please attach) *

☐ Yes ☒ No

Location of IC:

42°21'N 71°3'W ± 121 m

5. Attach a geotagged photograph of this IC. *

IC_A5-20170330-170635.jpg

Require more photos? *

☐ Yes ☒ No

Additional Comments about this IC.

Collector for ArcGIS

RCRA Collector Map

Collect new

Search

- Monitoring Well
Monitoring Sites
- Other
Monitoring Sites
- Enforcement
Institutional Controls
- Government
Institutional Controls
- Informational
Institutional Controls
- Other
Institutional Controls
- Proprietary
Institutional Controls
- Border Security
Engineered Controls
- Groundwater Recovery
Engineered Controls
- Immobilization
Engineered Controls
- Physical Cap
Engineered Controls
- Reactive Barrier
Engineered Controls
- Enforcement
Institutional Control Boundary
- Government
Institutional Control Boundary
- Informational
Institutional Control Boundary
- Other
Institutional Control Boundary
- Proprietary
Institutional Control Boundary

R1 Tools in Development

AboutContentLegend

Legend

RCRA Corrective Action (2020) Facilities

Engineered Controls from LTS Assessments

RCRA CA Assessment 2017

Monitoring Stations from LTS Assessments

RCRA CA Assessment 2017

RCRA Facility Boundaries

RCRA AIII Boundaries

Sole Source Aquifer

(1 of 3)

Hadco (Sanmina)

EPA ID: NHD046312559

Address: 6 Linlew Dr , DERRY, NH 03038

EPA Project Manager Information:
Stephanie Carr, carr.stephanie@epa.gov,
617-918-1363

Facility Contact Information: Russell
Webb, (603) 437-3149

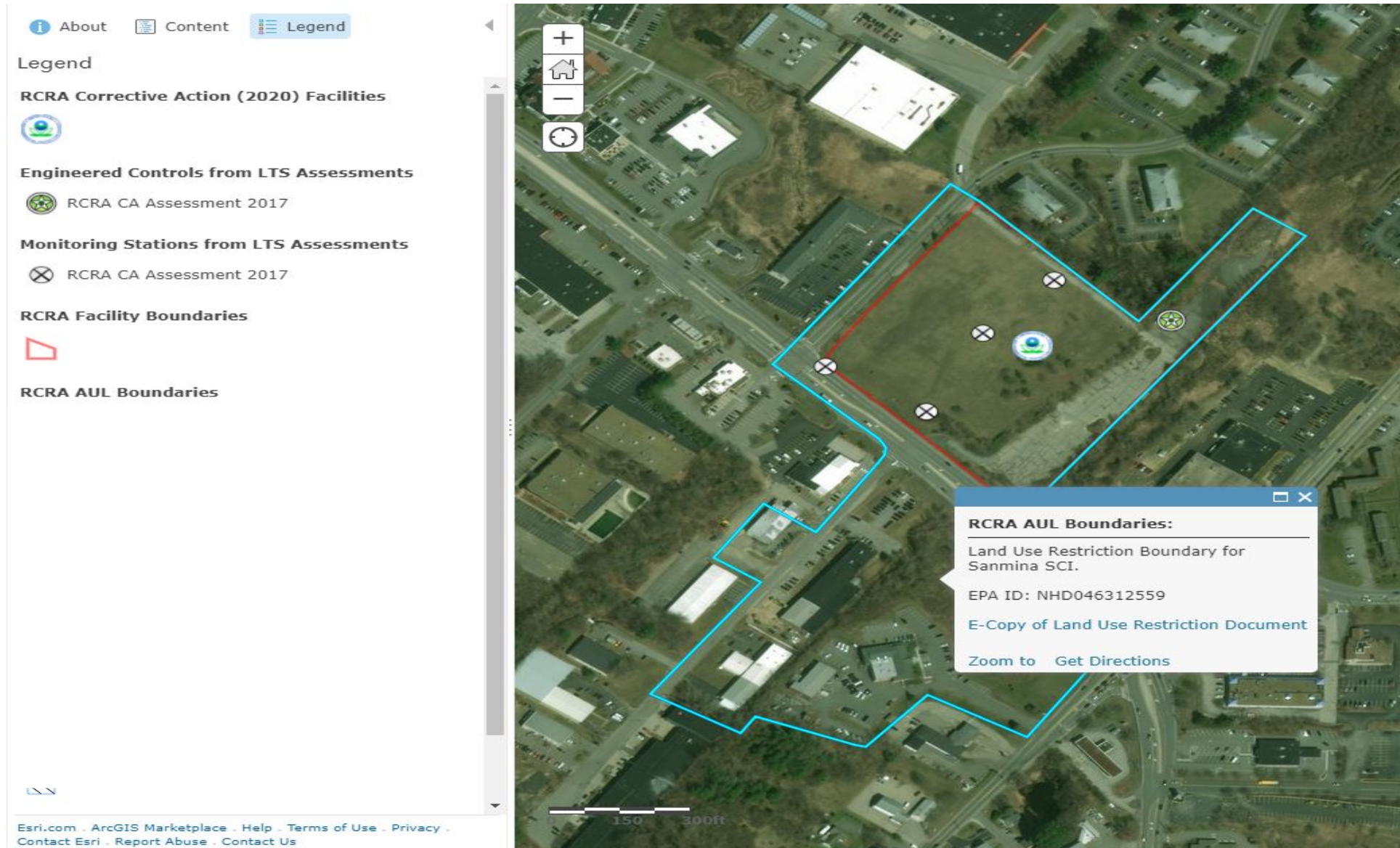
Visit the Site Profile Page

View Available Electronic Documents

Click any additional boundaries or point
displays associated with the facility for
more facility-specific information.

Zoom toGet Directions

R1 Tools in Development



R1 Tools in Development

The screenshot displays an ArcGIS web application interface. On the left, a legend panel lists several layers: 'RCRA Corrective Action (2020) Facilities', 'Engineered Controls from LTS Assessments' (with a sub-entry 'RCRA CA Assessment 2017'), 'Monitoring Stations from LTS Assessments' (with a sub-entry 'RCRA CA Assessment 2017'), 'RCRA Facility Boundaries', and 'RCRA AUL Boundaries'. The main map area shows an aerial view of an industrial site with colored overlays: a blue polygon for facility boundaries, a red line for AUL boundaries, and several white circle icons with an 'X' representing monitoring stations. A popup window titled '(1 of 3) Hadco_Sanmina Monitoring Station' is open, displaying the following information:

Hadco_Sanmina Monitoring Station	
Facility Name	Hadco_Sanmina
Facility ID	NHD046312559
Monitoring Station Name	GZ416 R
Type of Monitoring Station	Monitoring well
Latitude	42.89609145291637
Longitude	-71.32833841233733
Additional Comments (if applicable)	Well with highest levels or contamination, located directly above source area.


At the bottom of the popup, there are links for 'Zoom to', 'Get Directions', and 'Show Related Records'. The bottom of the map interface includes a scale bar and a copyright notice for Esri.com.

R1 Tools in Development


[About](#) [Content](#) [Legend](#)

Legend


RCRA Corrective Action (2020) Facilities




Engineered Controls from LTS Assessments

 RCRA CA Assessment 2017


Monitoring Stations from LTS Assessments

 RCRA CA Assessment 2017


RCRA Facility Boundaries





RCRA AUL Boundaries





Region 1 Tribes


 MALISEET


 MASHANTUCKET PEQUOT


 MICMAC

 MOHEGAN


 NARRAGANSETT

 PASSAMAQUODDY

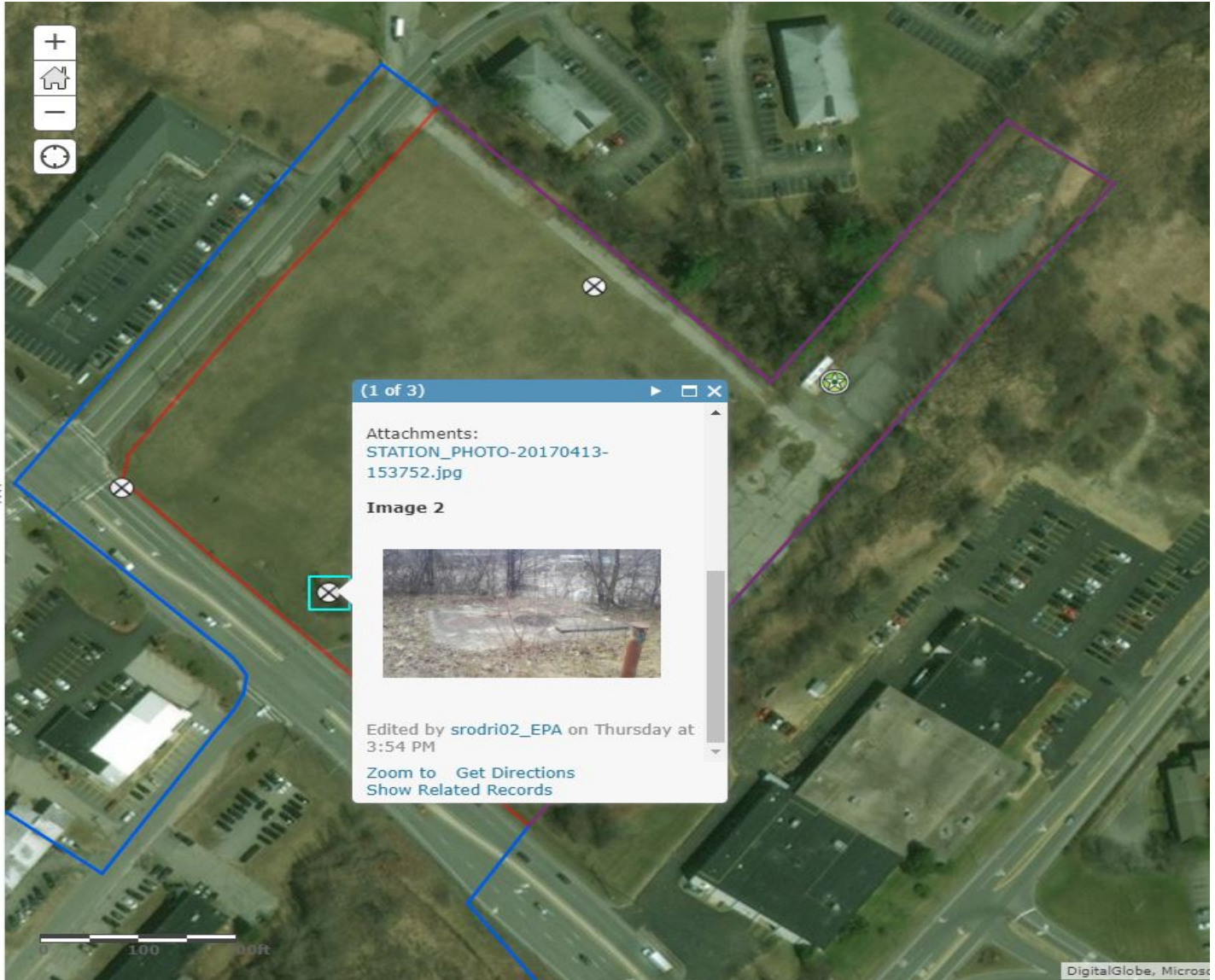
 PENOBSCOT

 WAMPANOAG

Sole Source Aquifer




Esri.com · ArcGIS Marketplace · Help · Terms of Use · Privacy · Contact Esri · Report Abuse · Contact Us



(1 of 3)

Attachments:
[STATION_PHOTO-20170413-153752.jpg](#)

Image 2



Edited by [srodri02_EPA](#) on Thursday at 3:54 PM

[Zoom to](#) [Get Directions](#) [Show Related Records](#)

R1 Tools in Development

Final Report

Generated out of Access Database in PDF Format



Part IV. Engineered Controls (EC) Review and Assessment

Use this section for site-specific assessment findings on the ECs identified in Parts I and II. If needed, use a separate sheet for each unique EC at this site.

A. Basic Information

1. Common name of this EC? Pump and Treat
2. What type of EC is this? Groundwater Recovery System
3. Is a map of this EC available? (If Yes, please attach) yes
4. Are design and as-built plans available for this EC? (If Yes, please attach) no
5. Attach a geotagged photograph and describe the general location of this EC: The groundwater recovery system is housed in a secure trailer in the northeast corner of the site.
6. Additional comments about this EC:

Page 6



EPA Region 1 - Longterm Stewardship Assessment Checklist

Updated August 11, 2016

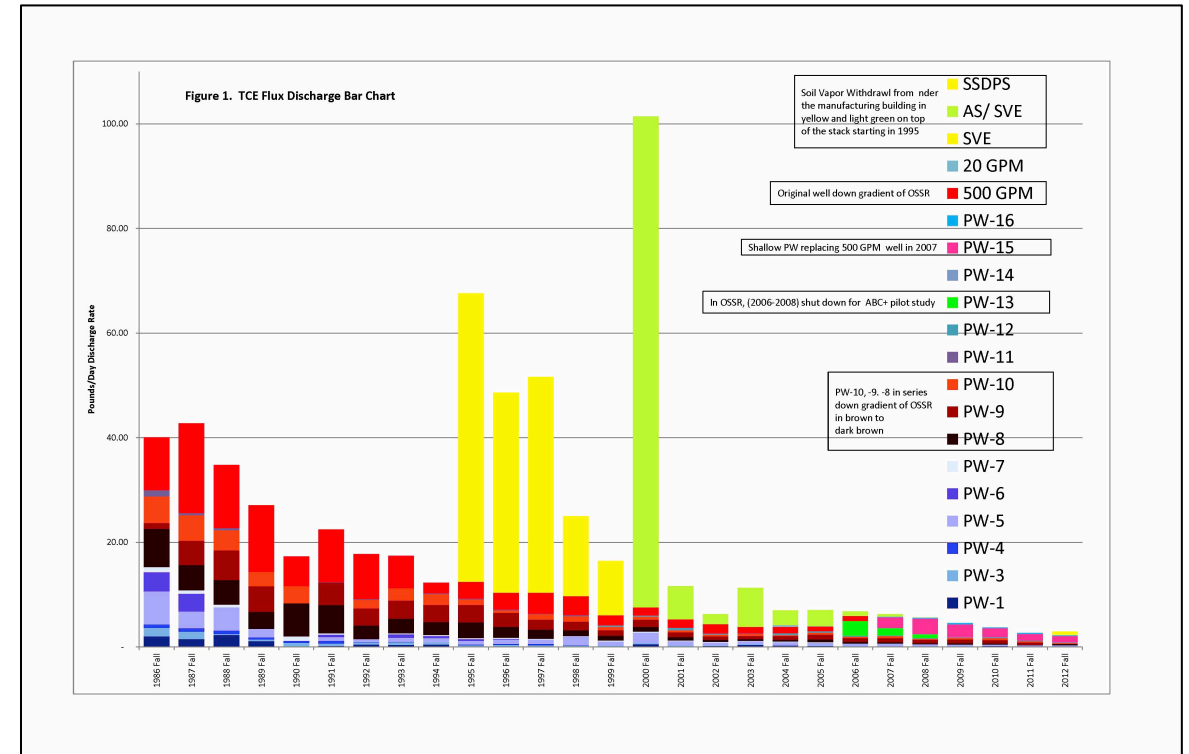
The recovery wells are pneumatically driven, and some are electric submersibles.

B. Specific EC LTS Information

1. Has the EC specified in the CA Remedy been fully implemented and constructed in accordance with any applicable plans and schedule? yes
Comment:
2. Is this EC fully intact? yes
Comment:
3. Is any damage to the EC visible? no
Comment:
4. Have repairs to this EC been necessary? (if Yes, provide general description in comments) no
Comment:
5. Does this EC provide control for the entire extent of contamination (horizontal and vertical)? yes
Comment:
6. Is this EC effective at reducing contaminant migration? Is data available to provide supporting evidence? yes

Case Study - Region 5

- EPA lead Corrective Action cleanup the former National Copper Products site in Dowagiac, Michigan
- Vapor Intrusion – TCE in groundwater
- On-site building leased by new owners to multiple entities for variety of occupational uses – did not consider deed restriction/institutional controls



Case Study - Region 5

- While institutional controls were in place, EPA site visit discovered use restrictions were not being followed
- Increased outreach due to continued engineering and institutional controls
 - Mailed informational letters to building employers/tenants that explain the sampling results, the result implications, and the immediate actions taken by owner to reduce indoor air TCE levels
 - Lease not renewed for occupancy by sensitive receptors
 - Indoor air Monitoring

Case Study - Region 5

Final Remedy Engineering Controls

- Collaborate with RCRA Enforcement Branch to conduct CA site inspections.
- RCRA inspectors submit the inspection report to Remediation and Reuse Branch providing the current status of operation and maintenance of final remedy (SVE, Pump and treat system) and engineering controls (cap maintenance, fence, etc).

Contact info

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