Long-Term Stewardship R3 RCRA Corrective Action



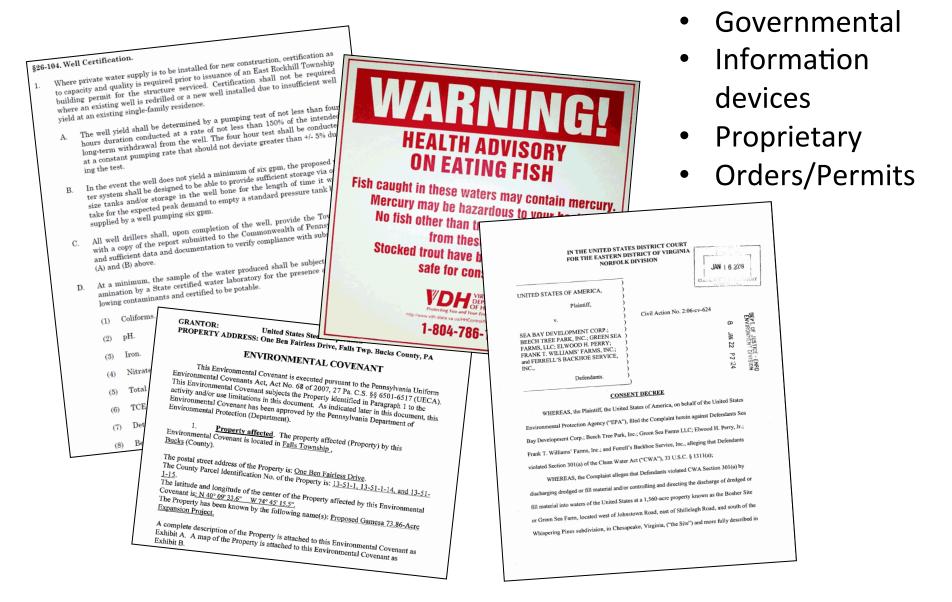
Joel Hennessy Land & Chemicals Division EPA Region 3 April 19, 2017



Engineering Controls

e.g., Landfill Cap, Fence, Asphalt Cover, Permeable Reactive Barrier, etc.

Institutional Controls



Long Term Stewardship Approach

- 1. Mapping ICs and ECs
- 2. Maps and information on public website
- 3. Record ICs and ECs in RCRAInfo (including GIS)
- 4. IC/EC Assurance Monitoring
- 5. Engage & update local officials

Mapping ICs and ECs

- Property Boundary (for site-wide ICs)
- Individual areas (AULs, specific ECs)
- ESRI ArcGIS Online maps for website (Geoplatform)
- GIS data in RCRAInfo database
- Geospatial PDF
- Improve standard of practice for environmental covenant mapping and figures
 - Metes & bounds
 - Figures
 - Coordinates
 - Geographic data validation

LEGAL DESCRIPTION

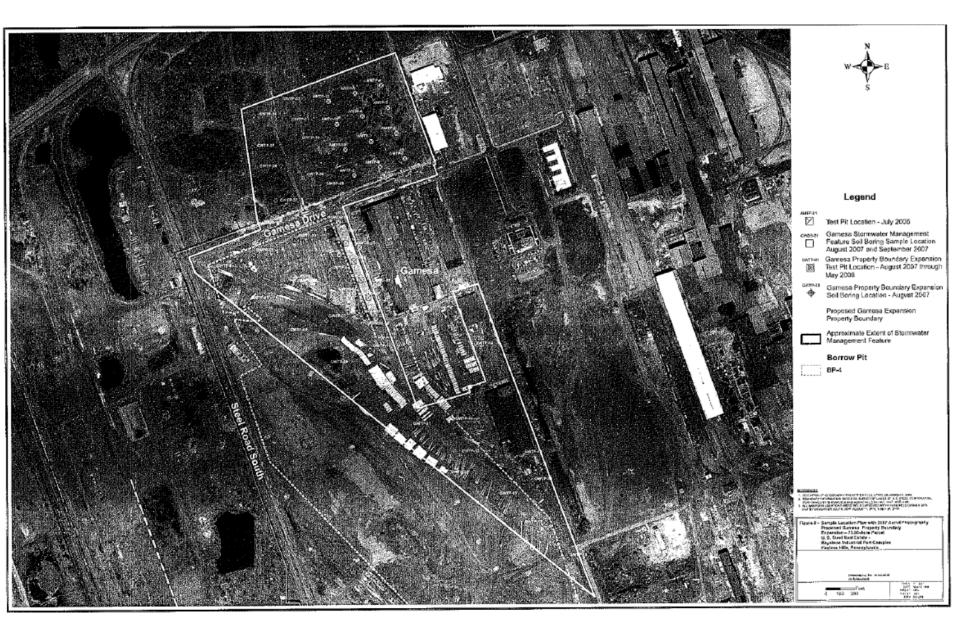
for

Proposed Gamesa Property Boundary Expansion Within KEYSTONE Industrial Port Complex

ALL THAT CERTAIN tract of land situated in the Township of Falls, County of Bucks, Commonwealth of Pennsylvania as shown on Figure 2 - Sample Location Plan with 2007 Aerial Photography Proposed Gamesa Property Boundary Expansion – 73.86 acre parcel prepared for U.S. Steel Real Estate dated May 21, 2008 by Langan Engineering and Environmental Services, Philadelphia, Pennsylvania bounded and described as follows to wit:

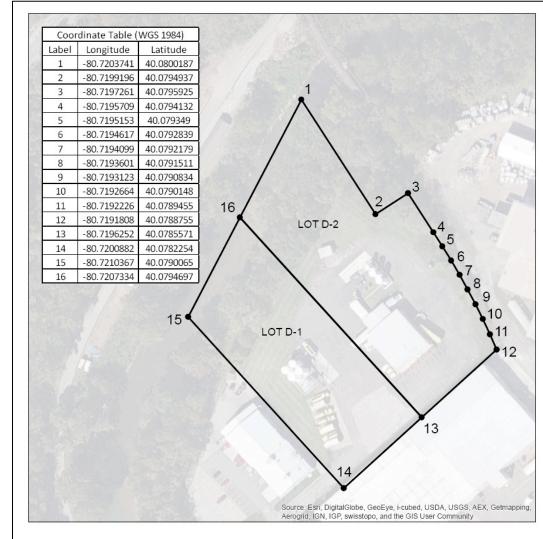
BEGINNING at a corner, said corner being the intersection of the right of way line of Gamesa Drive(80 feet wide), Steel Road South (80 feet wide) and running thence; 1) along the northerly right of way line of Gamesa Drive, S 90°00'00" E, a distance of 542.68 feet to a point; 2) through lands of U.S. Steel, N 00°00'00" E, a distance of 64.00 feet to a point; 3) through same, N 11°55'03" E, a distance of 787.98 feet to a point; 4) through same, S 90°00'00" E, a distance of 1157.09 feet to a point; 5) through same, S 00°00'00" W, a distance of 835.00 feet to a point; 6) along northerly right of way line of Gamesa Drive, N 90°00'00" W, a distance of 20.00 feet to a point; 7) crossing Gamesa Drive, S 00°00'00" W, a distance of 58.13 feet to a point; 8) along the southerly side of Gamesa Drive, N 90°00'00" W, a distance of 695.50 feet to a point; 9) along Gamesa Parcel, S 00°00'00" W, a distance of 1572.87 feet to a point; 10) along same, S 90°00'00" E, a distance of 389.00 feet to a point; 11) along same, N 00°00'00" W, a distance of 43.00 feet to a point; 12) along same, S 90°00'00" E, a distance of 137.75 feet to a point; 13) along same, N 90°00'00" E, a distance of 685.04 feet to a point; 14) along same, S 90°00'00" E, a distance of 188.25 feet to a point; 15) along other lands of U.S. Steel, S 00°00'00" W, a distance of 2362.09 feet to a point; 16) through same, N 30°42'26" W, a distance of 3546.31 feet to a point; 17) along Steel Road South, N 00°00'00" E, a distance of 129.99 feet to a corner, said corner being the true PLACE OF BEGINNING.

Covenant Exhibit

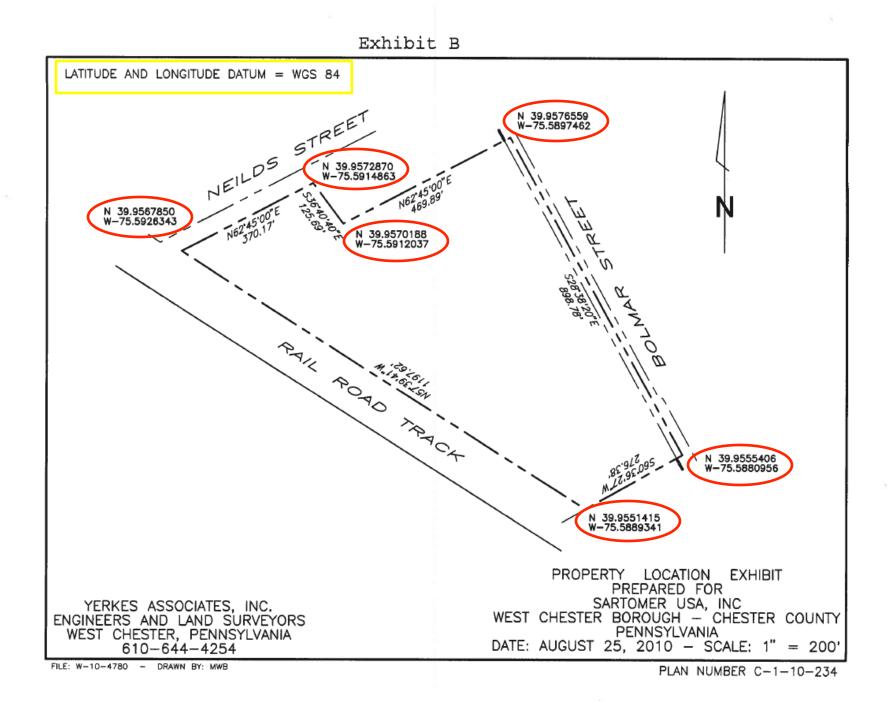


Improved Exhibit:

- Vertices shown
- Coordinate table
- Light or no background
- North arrow
- Bar Scale
- 8.5 X 11
- Can be copied in B/ W multiple times

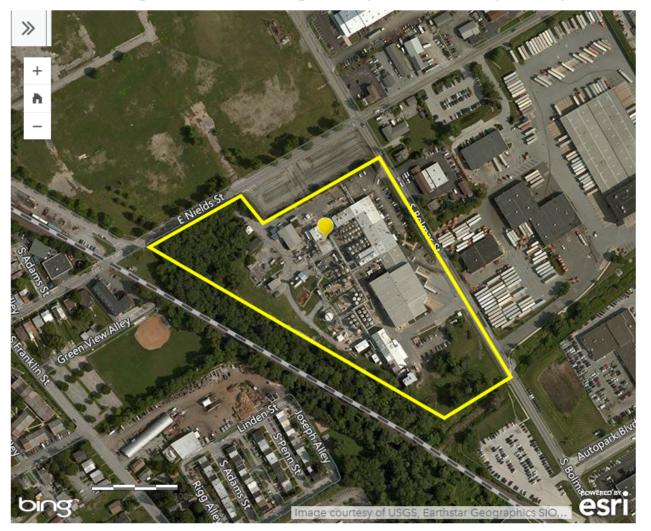






Site Description

Interactive Map of Arkema Incorporated, West Chester, Pennsylvania



Additional Site Information

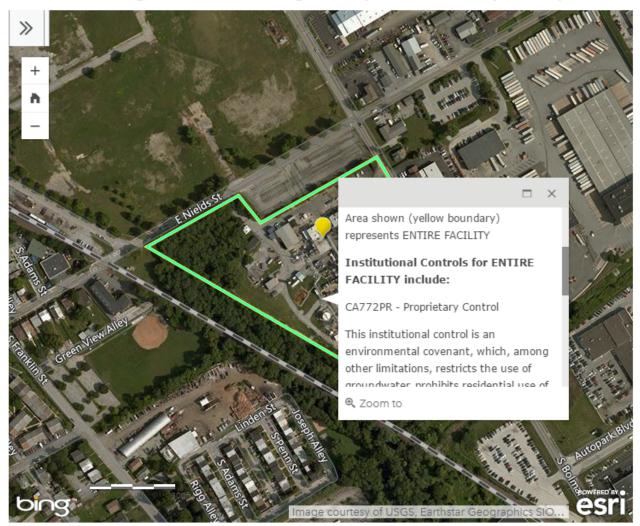
- <u>Contacts for this Clean Up</u>
- <u>Documents, Reports and</u> <u>Photographs</u>
- More Information from the <u>Envirofacts database</u>

View larger map

The Arkema, Inc. Facility (formerly Sartomer Company and part of Atofina) is located in West Chester, Chester County, Pennsylvania. It is located in an industrial area with a small stream and a high-density residential area to the west. The site consists of 12 contiguous acres of which eight are the industrial portion. The area is served by a public water and sewer system.

Site Description

Interactive Map of Arkema Incorporated, West Chester, Pennsylvania



Additional Site Information

- <u>Contacts for this Clean Up</u>
- Documents, Reports and
 Photographs
- More Information from the <u>Envirofacts database</u>

View larger map

The Arkema, Inc. Facility (formerly Sartomer Company and part of Atofina) is located in West Chester, Chester County, Pennsylvania. It is located in an industrial area with a small stream and a high-density residential area to the west. The site consists of 12 contiguous acres of which eight are the industrial portion. The area is served by a public water and sewer system.



Environmental Topics

Laws & Regulation

GRANTOR:

Sartomer USA, LLC

PROPERTY ADDRESS: 610 South Bolmar Street, West Chester, PA 19382

ENVIRONMENTAL COVENANT

This Environmental Covenant is executed pursuant to the Pennsylvania Uniform Environmental Covenants Act, Act No. 68 of 2007, 27 Pa. C.S. §§ 6501 - 6517 (UECA). This Environmental Covenant subjects the Property identified in Section 1 to the activity and/or use limitations in this document. As provided in Section 5 of UECA, 27 Pa. C.S. § 6505, this Environmental Covenant runs with the land.

1. **Property affected**. The property affected (Property) by this Environmental Covenant is located in <u>West Chester Borough, Chester County</u>. The postal street address of the Property is: <u>610 South Bolmar Street</u>, <u>West Chester, PA 19382</u>. The County Parcel Identification No. of the Property is: <u>1-10-234</u>. The latitude and longitude of the center of the Property affected by this Environmental

Covenant is: 39.95694 and -75.59028.

The Property has been known by the following name(s): ARCO, Sartomer Company, Inc.

The area described above is a polygon, the vertices of which have the following geographic coordinates (longitude and latitude, with a datum of WGS1984):

longitude, latitude -75.5897462, 39.9576559 -75.5880956, 39.9555406 -75.5889341, 39.9551415 -75.5926343, 39.9567850 -75.5914863, 39.9572870 -75.5912037, 39.9570188 -75.5897462, 39.9576559

A complete description of the Property is attached to this Environmental Covenant as Exhibit A. A map of the Property is attached to this Environmental Covenant as Exhibit B.

2. Property Owner / GRANTOR. Sartomer USA, LLC is the Owner of the Property. The mailing address of the Owner is: <u>Sartomer USA, LLC, Oaklands Corporate Center, 502</u> <u>Thomas Jones Way, Exton, PA 19341.</u>

Previous deedholder: Orkem Acquisition Corp changed its name to Sartomer Company, Inc. on November 9, 1988. Sartomer Company, Inc. changed its name to Sartomer USA, LLC on November 6, 2009.

Related Topics: Corrective Action Sites around th

Documents, Repo Arkema Incorpora Company) in Wes

Some of Arkema Resource Conservation and Recove

You may need Adobe Reader to view files on this

 <u>Corrective Action Long Term Stewardship Inspect</u> <u>(Formerly: Sartomer Company, Incorporated) in V</u> <u>(PDF)</u> (2 pp, 150 K) <u>DCDA Compatibulation Long Terms Stewardship</u>

RCRA Corrective Action Long-Term Stewardship

- <u>Corrective Action Statement of Basis Arkema Inco</u> <u>Company, Incorporated) in West Chester, Pennsyl</u> Statement of Basis for RCRA Corrective Action I
- <u>Corrective Action Environmental Covenant Arkem</u> <u>Company, Incorporated) in West Chester, Pennsyl</u> PA Environmental Covenant - Deed Restriction
- <u>Environmental Indicator Human Exposure Arkema</u> <u>Company, Incorporated) in West Chester, Pennsyl</u>

RCRA Environmental Indicator - Current Human Exposures under Control

						40040050074							
ĸr	(EMA IN					WESTCH	ESTER		F	AD042259374	9374		
dd	GIS for Fa	<u>icility</u> S	Show All C	oordinates						2 record(s) found.			
				Pag	ge: 1				io To	~			
		OID lafa							0.5	- dia ata a	Polygon vertices in		
	Owner	GIS Infor Seq#		ion Date	Acreage	A Source C	creage Code	Source Date	Count	ordinates	10		
	03	211		/2010	12	000		09/30/2009		ide Coordinates	RCRAInfo		
					Seq #	Latitud	le L	ongitude					
					1	39.9576	656 -7	5.589746	1				
					2	39.9555	541 -7	5.588095	6		Linked t		
					3	39.9551	142 -7	5.588934			institutior		
					-								
			€		4 tates nental Protect	39.9567		5.592634	to Exist	ing Event	control		
				EPA United S Environe Agency MA INC				Ithorities	to Exist				
			ARKE					Ithorities			RCRA Jafo Help		
			ARKE	MA INC				Ithorities		R	RCRA Jafo Help		

Institutional & Engineering Event Codes in RCRAInfo

- Engineering Controls Established:
 - CA770NG (non-groundwater control)
 - CA770GW (groundwater control)
- Institutional Controls Established:
 - CA772GC (governmental control)
 - CA772PR (proprietary control)
 - CA772EP (enforcement & permit tools)
 - CA772ID (information device)

RCRAInfo

- RCRA Program database
- Six modules:

– GIS Data

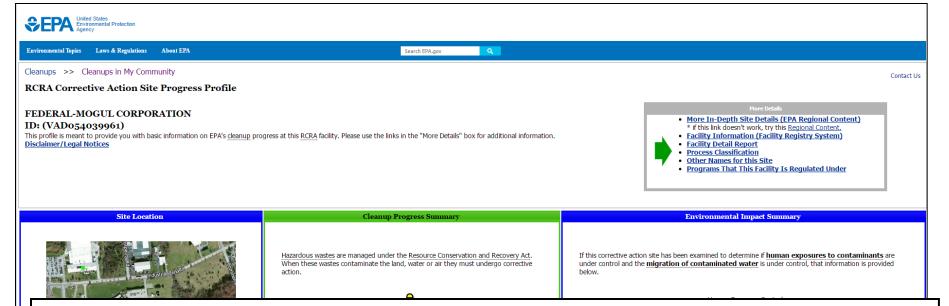
- Handler Data
- Permitting, Closure, Post-Closure Data
- Corrective Action Data
 - Compliance, Monitoring and Enforcement
 - Financial Assurance Data

Event (what happened) Area (where did it happen) Authority (what made it happen)

Points, lines, or polygons Lat/Lon coordinates of vertices Includes other metadata (e.g., datum) Linked to Area

Cleanups in My Community Cleanups in My Community (CIMC) enables you to map and list hazardous waste cleanup locations and grant areas, and drill down to details about those cleanups and grants and other, related information. This page provides several ways to get started. Lists or Tables: Maps: · You may want to map the cleanups in: · You may want to list cleanups or grants, in table format, for a your state or territory, ZIP Code area or city. · the whole country, or · You may want to create your own table based on: just a specific geographic area. selected geography: You may want to see: ZIP, city, county, state, tribal area, congressional district all types of cleanups, or watershed, EPA region, the whole USA just those for a particular cleanup program. round a location addre **Cleanups In My Community Map** All of the "map" options go to different "views" of the same interactive CIMC map, and there you can zoom and pan to areas of interest, and add additional information. Site Boundaries (where available) Look through the Map Cleanups options below or click on the Go following map. 5 S Main R Industrial Park Rd Map cleanups by clicking on a state or territory below. Cleanups 460 FEDERAL MOGUL CORPORATION OR RCRA Corrective Action Enforcement & Compliance Census 2010 1 Mile Report (PDF) KR Census 2008-2012 - 1 mile (PDF) OK AZ H Trust Territorie VI PR Partnership Dr 0 rthern Marian

CIMC – Site Profile Page



Are Controls in Place at this Site?

	Control Type	Control in Place?	Area(s) Subject to Control
	Information Device (ID)	Yes	TCE PLUME
Institutional Controls (Type)	Governmental Control (GC)		
Institutional controls (Type)	Enforcement & Permit Tools (EP)	Yes	ENTIRE FACILITY, SOIL MANAGEMENT AREA, TCE PLUME
	Proprietary Control (PR)	Yes	ENTIRE FACILITY, SOIL MANAGEMENT AREA
Engineering Controls (Type)	Groundwater (GW)	Yes	ENTIRE FACILITY
Engineering concrois (Type)	Non-Groundwater (NG)	Yes	ENTIRE FACILITY, SOIL MANAGEMENT AREA

Final Remedies with ICs & ECs – R3

(out of a 2020 GPRA Universe of 579 facilities)

State	# Sites with IC and/or EC (in RCRAInfo)	# Sites Mapped
DC	1	0
DE	5	5
MD	18	10
PA	92	56
VA	47	27
WV	15	10
Region 3 RCRA CA	178	108

as of 10/4/2016

Long Term Stewardship Approach

- 1. Mapping ICs and ECs
- 2. Maps and information on public website
- 3. Record ICs and ECs in RCRAInfo (including GIS)
- 4. IC/EC Assurance Monitoring
- 5. Engage & update local officials

IC/EC Assurance Monitoring

- Document review
- Site inspection checklist
- Site inspection (w/ checklist and geospatial PDF)
- IC/EC Monitoring report
- Goal:
 - Determine whether the IC/ECs are functioning and maintained
 - Identify and correct IC/EC deficiencies

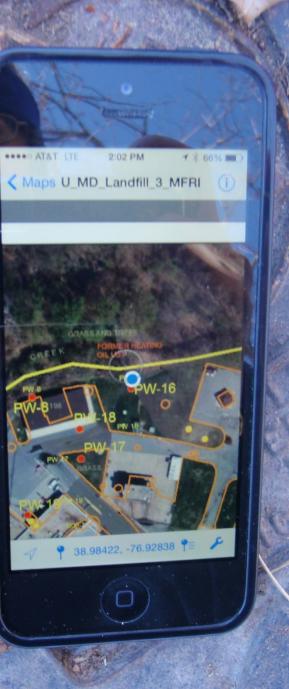
Geospatial PDF

- Adobe Acrobat PDF map
- Contains georeference data
- Both vector and raster information
- ESRI ArcMap can create geospatial PDFs
 - Natural end product in GIS workflow
 - Project managers already familiar with PDFs
 - Opens in Avenza Maps App on iOS and Android devices
 - Project managers can upload (no additional GIS support needed)



University of MD – Landfill Area 3 (MFRI)







What does an LTS evaluation look like?

- Preparation
 - Review remedy, recent data/reports
 - Develop checklist based on selected remedy and ICs/ECs
 - Maps gathered, brought into GIS
 - Update geospatial PDF
- Inspection
 - Brief meeting to discuss
 - Field tour visit everything on checklist (using geospatial PDF)
 - Photo documentation of current conditions (geotagged)
 - Close-out meeting
- Meet/contact with local municipality
 - Update with remedy status & progress; current points of contact
 - Ask about changes to land and water use, and any concerns they may have
- Follow-up
 - Prepare LTS report, post on web
 - Work with facility to correct any IC/EC deficiencies
 - Record outcome in RCRAInfo

Example: BAE Systems, York, PA



Long-Term Stewardship Checklist BAE Systems, 1100 Bairs Rd, York PA 17408 EPA web fact sheet: http://www.epa.gov/reg3wcmd/ca/pa/webpages/pad003025418.html

A. Pre-Inspection Items

Prior to the site visit, the following pertinent documents were reviewed to ensure remedial components are adequate and up to date:

- 1. 9/25/91 Corrective Action (CA) Permit
- 2. 4/1/05 Statement of Basis (SB)
- 3. 3/6/06 Final Decision and Response to Comments (FDRTC)
- 4. 3/6/06 CA Permit Modification
- 5. 9/13/06 Hazardous Waste Facility Post-Closure Permit
- 6. 3/27/07 National Pollutant Discharge Elimination System (NPDES) Permit
- 7. 2012 Comprehensive Monitoring Evaluation Inspection
- 8. May 2013 Operations and Maintenance Summary Report for the Groundwater Remediation Systems

In addition, financial assurance status of the facility was confirmed with PADEP; EPA factsheets, links, and mapping documents were reviewed and updated; a site visit was coordinated with the facility and PADEP; and a meeting with West Manchester Township officials was scheduled to follow the site visit.

B. Site visit

1. Attendees

Name	Affiliation	Phone	
Griff Miller	EPA	215-814-3407	
Joel Hennessy	EPA	215-814-3390	
Andrea Barbieri	EPA	215-814-3374	
Pam Trowbridge	PADEP	717-705-4839	
Lisa Wilt	PADEP	717-705-4910	
Paul Lagowski	BAE	717-225-8059	
Steve Douglass	BAE	717-524-0616	
George Rodenburg	BAE	717-225-7062	
Bob Errera	BAE	717-524-0531	
Fred Wise	BAE	717-818-8830	
Emily Wade	Leidos	717-425-8894	

Y <u>x</u> N <u></u> comments: Y _x_ N <u></u> comments:

Y _x_ N ____ comments:

2. Introduction and purpose of visit

3. File review

Does the facility have a copy of:

a.	4/1/05 SB?		
э.	3/6/06 FDRTC?		

- c. 9/25/91 CA permit?
- d. 3/6/06 CA permit mod? Y _x N ___ comments:

- e. Current NPDES permit? not yet issued
- f. Current post-closure permit? Y _X N ___ comments:
- g. Inspections of MTR Landfill and any other documentation required as part permit? Y _x N ___ comments:

Y ____ N _x_ comments: permit has expired but renewal

 Deed with notice of use restriction? Y x N comments: 4/3/07 covent 5/17/07 with York County

4. Site walk

- a. Assess locations (IAW geospatial .pdf) and conditions of WWHS componen
 - Air stripper, piping, outfall, and other treatment components: only GAC WWHS (no air stripper); components and building in good condition
 Well network

2. Wennet	WORK .		
Well	Location	Condition	
MW20S	Accurate	Good	
PW2 (pumping? y/n)	Accurate	Good; pumping	
MW13S	Accurate	Good	
MW13I	Accurate	Good	
PW4 (pumping? y/n)	Accurate	Good; pumping	
MW36	Accurate	Good	
PW1 (pumping? y/n)	Accurate	Good; pumping	
MW17S	Accurate	Good	

b. Assess location (IAW geospatial .pdf) and condition of MTR Landfill

- Cap integrity: evidence of burrowing near southeastern border of landf set outside burrow
- 2. Adequate vegetation: excellent!

3. Well network

Well	Location	Condition	
MW16	Did not visit	Did not visit	
MW55	Accurate	Good	
MW1	Accurate	Good	
MW9	Accurate	Good	
MW2A	Accurate	Good	

c. Assess locations (IAW geospatial .pdf) and conditions of EPBA components

- Air stripper, piping, outfall, and other treatment components: treatment components in good condition
- 2. Well network

Well	Location	Condition	
MW21	Accurate	Good	
MW45 (pumping? y/n)	Accurate	Good; pumping	
MW37	Accurate	Good	
MW47 (pumping? y/n)	Accurate	Good; pumping	
MW48 (pumping? y/n)	Accurate	Good; pumping	
MW43	Accurate	Good	
MW19S	Did not visit	Did not visit	

MW49 (pumping? y/n)	Did not visit	Did not visit; pumping	
MW39	Did not visit	Did not visit	

- 5. Questions, discussion, and wrap-up
 - a. Final remedy for CA doesn't appear to include MTR Landfill at all should it? Final remedy decision should have mentioned landfill and post-closure requirements for completeness; however, post-closure requirements and inspections are up-to-date and being maintained by PADEP so there's little risk that this landfill will go ignored.
 - b. May wells that aren't part of monitoring program(s) be decommissioned? Yes, and EPA/PADEP would prefer if these unused wells were decommissioned. Facility expects to implement a progressive decommissioning program in 2015.
 - c. Since NPDES permit covers GW treatment systems and post-closure permit covers MTR Landfill, is the CA permit necessary? *Since neither of these state-run programs have CA authority, the CA permit is still technically required in order to enforce Corrective Action requirements.*
 - d. Considering the length of time of groundwater recovery/treatment (began in early '90s) and the low amounts of VOCs recovered annually, are there more feasible remedial options moving forward? Facility's consultant will analyze feasibility of different/more appropriate remedial options and work with EPA/PADEP to determine implementability.
 - e. Are there any local ordinances that also put restrictions on GW use in the area? Any land use restrictions other than zoning? BAE personnel believed that there is some type of ordinance requiring hookup to public utilities (i.e., water and sewer) within a certain radius of access to these utilities. According to township officials, residents near the facility rely on private groundwater wells for water, and no resource restrictions other than zoning exist near the facility.
 - f. The CA permit expires March 6, 2016. Does the facility need to submit a renewal application? EPA does not expect that a renewal application from the facility will be necessary. EPA will determine the need to renew or modify the CA permit prior to expiration based on the present remedy's performance and/or any proposed changes to the remedy (see B.5.d., above).

6. West Manchester Township visit

a. Attendees

Name	Affiliation	Phone			
Griff Miller	EPA	215-814-3407			
Joel Hennessy	EPA	215-814-3390			
Andrea Barbieri	EPA	215-814-3374			
Kelly Kelch	Township manager	717-792-3505			
Monica Love	Township zoning officer	717-792-3505			
Zane Williams	Township stormwater officer	717-792-3505			

b. Summary of discussion

EPA briefed Township officials on the importance of keeping track of the long-term obligations of facilities in their area and of EPA's efforts in developing tools that can help in this regard (e.g., mapping of institutional and engineering controls, use of environmental covenants, periodic LTS visits). After EPA described the components of BAE's remedy, EPA's question (B.5.e., above) and any Township questions were addressed. One Township issue

LTS Evaluation Codes - RCRAInfo

• CAS88P: LT Stewardship – Pass

 LTS assessment completed, all Institutional Controls and/or Engineering controls (IC/EC) are in place, maintained and operated in the manner envisioned when EPA/State selected the remedy, and with current policies and practices

• CAS88N: LT Stewardship – Need additional Information

 Additional information or changes in operation, maintenance of the IC/EC are needed to make a CAS88P determination

• CAS88C: LT Stewardship – Compliance Review

 Selected IC/EC are not in place, operated or maintained, or other issues are identified that suggest the selected remedy is no longer appropriate for the current conditions at the facility, therefore a comprehensive remedy compliance assessment is required



Link Areas to Existing Event



BAE SYSTEMS

YORK

PAD003025418

Event Information

Act Loc	Event Code	Resp Agcy	Actual Date	Sched Date Orig	Sched Date New	Resp Person	Suborg	Notes
PA	CAS88P1	E	05/21/2014			GM	3LC30	5/21/2014 - Inspection - This LTS report can be found on the Corrective Action Facility page on the EPA Region 3 - RCRA Corrective Action website.

Authority Information

Activity Loc	Owner	Туре	Effective Date	Resp Agency	Description
PA	HQ	0	09/25/1991	E	Operating Permit

Area Information (Please select one or more areas.)

4 - ENTIRE FACILITY	2 - EAST PROPERTY BOUNDARY AREA-SWMUS 20,24
3 - MAIN FACILITY-ALL BUT SWMUS 18,20,24	5 - MTR LANDFILL
1 - WEST WAREHOUSE AREA-SWMU 18	

Back to Event List

URL: /rcrainfo/ca/CA_event_area_upd.jsp

LTS Assessments

State	FY 2014	FY 2015	FY 2016	FY 2017
DC	0	0	0	0
DE	1	2	2	2
MD	3	1	0	0
ΡΑ	3	4	15	14
VA	5	9	7	5
WV	3	1	4	1
Region 3 RCRA	15	17	28	22

Questions?

Mapping and LTS Approach documents:

<u>https://www.epa.gov/sites/production/files/2016-07/documents/</u> <u>rcra_mapping_of_institutional_and_engineering_controls.pdf</u>

https://www.epa.gov/sites/production/files/2016-07/documents/ r3ltsprogram_july2016.pdf

Cleanups in My Community:

https://www.epa.gov/cleanups/cleanups-my-community