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Reuse and the Benefit to Community
Universal Oil Products (Chemical Division) Superfund Site

Executive Summary

Once home to a chemical and solvent recovery facility, the 75-acre Universal Oil Products (Chemical Division) Superfund site in East Rutherford, New Jersey, now supports several shopping areas and a rail line extension. The rail extension, known as the Sports Line, connects the commuter rail line on site with nearby MetLife Stadium, home of the New York Giants and New York Jets and site of the 2014 Super Bowl. Collaboration among EPA, state agencies, the state transit authority, the site's potentially responsible party, Honeywell International, Inc., and local developers have made the site's cleanup and reuse possible.

Today, with cleanup of other parts of the site ongoing, EPA and the State of New Jersey continue to work to protect public health and the environment, while the site's redevelopment is providing long-term economic and community benefits. This case study explores the site's cleanup and reuse, illustrating the opportunities, benefits and impacts of Superfund site redevelopment in action.

Positive Impacts

- **Businesses on site support about 254 jobs and contribute more than $8 million in annual employment income to the local community.**
- **Lowe's Home Improvement Center employs 150 people and provides about $5.5 million in annual employment income to the community.**
- **The total market value of land and businesses on site was over $44.3 million in 2013.**
- **In 2013, on-site properties generated over $650,000 in property tax revenues for Bergen County.**
- **Public transportation ridership on the Meadowlands rail spur saves about 170,000 vehicle miles traveled during each football game.**

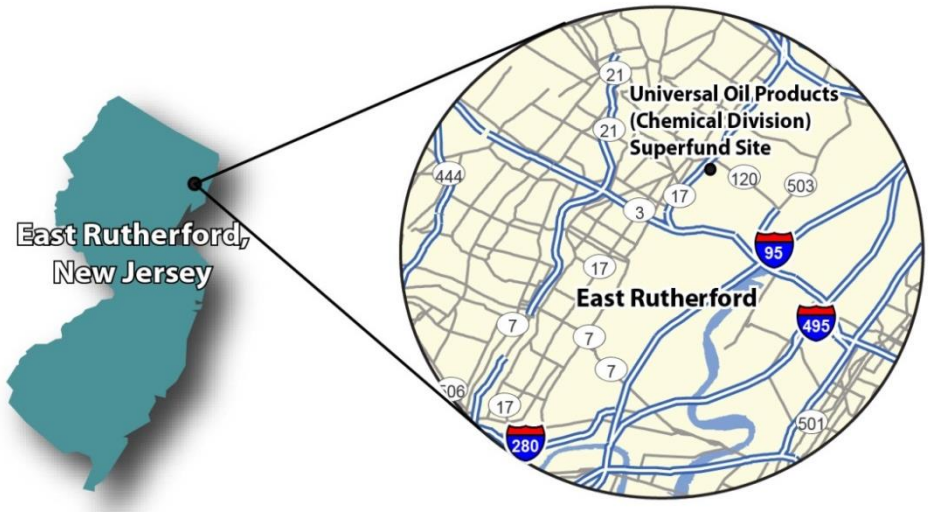

Figure 1: The site's location in East Rutherford, Bergen County, New Jersey

Key:
Parcel boundaries
Site boundaries

Figure 2: Aerial view of major site reuses

NORTH

Figure 3: Aerial view of the site and its proximity to the Meadowlands Sports Complex

NORTH

Introduction

When a Superfund site property is restored for reuse, it can revitalize a local economy with jobs, new businesses, tax revenues and local spending. This case study captures the on-site and surrounding area impacts of the new developments at the Universal Oil Products (Chemical Division) Superfund site.

The site comprises four parcels of land in East Rutherford, Bergen County, New Jersey (Figure 1). The site is bordered to the east by Berry's Creek and to the west by State Route 17 in an urban industrial area (Figure 2). The site is just northwest of the Meadowlands Sports Complex (Figure 3) and portions of the site are part of local public transit systems. Commercial, residential and light industrial areas as well as tidal marshes surround the site. According to 2010 Census data, 8,913 people live in East Rutherford.

Site History

In 1932, an aroma chemical laboratory began operating on the site. Years later, site operations expanded to include the handling of chemical wastes and solvent recovery operations. Universal Oil Products (UOP) purchased the site and the facilities in 1960 and operated until 1979. At their East Rutherford location, UOP developed and manufactured small batch chemical intermediates for the aroma, pharmaceutical, agricultural, food and fragrance industries. The company's use of on-site wastewater lagoons and housekeeping related to raw materials resulted in the contamination of site soil, wetlands and ground water.

After investigations confirmed site contamination, EPA placed the site on the Superfund program's National Priorities List (NPL) on September 8, 1983.

Property Cleanup and Transformation

In the midst of local commercial and residential growth, the convenient location of the site was sure to catch the attention of local developers looking for development opportunities. After adding the site to the NPL in 1983, EPA and site stakeholders needed to consider potential commercial interests in the site property and plan the cleanup accordingly. EPA designated two main cleanup areas – operable unit (OU) 1 includes upland soils and OU2 includes site lagoons, wetlands and sediments.

Integrating Remedy and Reuse in OU1

To address the first cleanup area, EPA selected a remedy in 1993 that would make the upland soils safe for future construction workers and future business employees. The potentially responsible party, Honeywell

International, Inc., conducted an initial, short-term cleanup of the area's lagoons in 1990. Additional investigations found polychlorinated biphenyls (PCBs), polycyclic aromatic hydrocarbons (PAHs), volatile organic compounds (VOCs) and lead contamination on site. The remedy, selected in 1993, included digging up contaminated soils and treating or capping them, institutional controls, and ground water collection and treatment. EPA updated the cleanup plan in 1998 and 1999 to remove more soil and improve its treatment and disposal.

Cleanup soon gave way to construction efforts by private developers. As the lead agency for the area's cleanup, the New Jersey Department of Environmental Protection (NJDEP) issued a determination that the site was ready for redevelopment. Commercial construction began in 2005 and included placement/compaction of 3 to 5 feet of clean fill, and installation of geotechnical moisture/vapor intrusion barriers beneath the Lowes building. Between 2006 and 2008, several restaurants and stores on the western part of the site opened for business and began serving area residents and travelers passing through on State Route 17.

Other site actions have centered on New Jersey Transit's right-of-way. The transit system's Pascack Valley commuter rail line crosses a part of the site; the right-of-way required a different kind of cleanup. Between 2003 and 2005, New Jersey Transit sampled soil and cleaned up right-of-way areas on site and next to it. Investigations for the OU2 area are also ongoing.

Integrating Remedy and Reuse in OU2

Teamwork and communication among site stakeholders was essential to ensure that the cleanup and beneficial reuse of OU2 addressed local priorities, including the need for more public transportation. By 2000, the New Jersey Sports & Exposition Authority (NJSEA) recognized that the nearby Meadowlands Sports Complex had grown into a regional destination for sports, entertainment and cultural events. At the time, people could reach the area only by car and bus. This led to traffic congestion and limited access to the sports complex for people relying on public transit in northern New Jersey and New York City.[1] Anticipating additional population growth, NJSEA recognized the need for a new way for people to reach the sports complex. The solution was a new rail spur – a rail line extension that connects the Pascack Valley commuter rail line directly to the sports complex.

Building the Meadowlands Rail Line

Figure 4: Rail line construction, October 2007 (Source: NJSEA, Progress Photos)

Figure 5: Rail line construction, April 2008 (Source: NJSEA, Progress Photos)

Figure 6: Rail line construction, December 2008 (Source: NJSEA, Progress Photos)

Figure 7: Rail line construction, April 2009 (Source: NJSEA, Progress Photos)

[1] Meadowlands Railroad and Roadway Improvement Project Final Environmental Impact Statement. Prepared for NJSEA. August 2005.

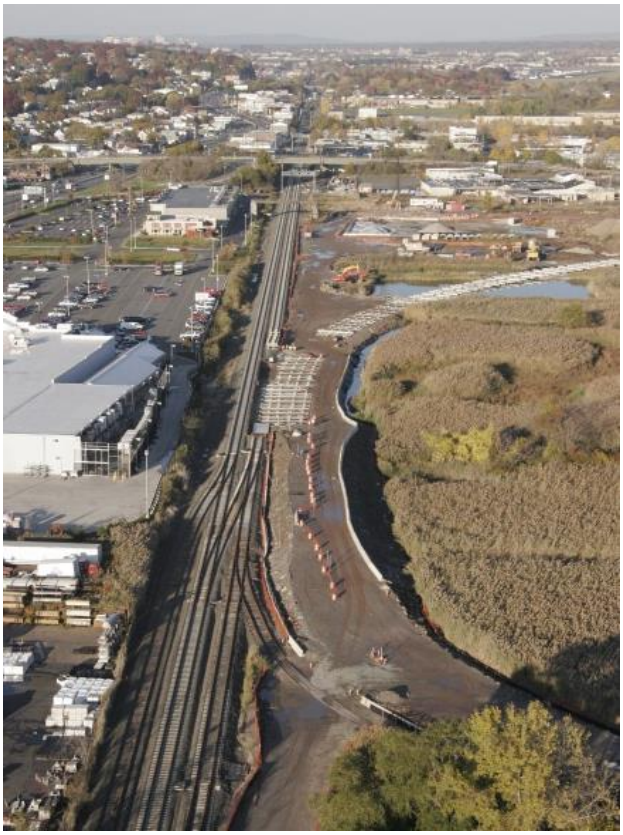

Figure 8: The Pascack Valley Line and the Meadowlands Rail Line in 2007 (Source: NJ Transit)

NJSEA, New Jersey Transit, the New Jersey Department of Transportation (NJDOT) and EPA assessed options for the rail spur during the project's design phase in 2004. In August 2005, NJSEA released an environmental impact statement for the project explaining that the preferred pathway, in order to reduce environmental impacts and construction costs and allow for future growth, would cross part of the site that had not yet been cleaned up – contaminated lagoons in OU2.[2] However, the project could not wait until the entire OU2 cleanup was complete.

The new rail line extension required well-orchestrated construction and cleanup for the entire width of the rail line right-of-way that would run through the site and additional coordination for construction of the off-site portions. In 2005, off-site rail line construction began and cleanup for potentially impacted OU2 areas soon followed. NJSEA purchased the OU2 property in 2006 and performed the interim remedial measure between April and June 2007 while off-site rail line construction continued. Interim remedial efforts for the extension included soil and sediment removal and off-site disposal. Remedial investigations are underway for OU2 and EPA plans to issue a Record of Decision when complete.

Figure 9: Retail plaza entrance

Construction of the elevated rail line began shortly after cleanup of the right-of-way. While contractors completed all rail station construction work in August 2010, the Meadowlands Rail Line officially opened on July 26, 2009. Construction teams, NJSEA, New Jersey Transit, EPA and NJDEP communicated frequently throughout the design phase, the remedial phase and the construction phase.

> ***"The entire project was a team effort."***
> ***-Rob Edwards, NJ Transit***

Local Impacts

There are 17 commercial businesses on the western portion of the site; each one provides jobs and employment income. They also help generate state sales and property tax revenues.[3] This section describes the specific impacts of five businesses and the Meadowland Rail Line. Other businesses on site include restaurants, retail stores and health and wellness facilities.

[2] Meadowlands Railroad and Roadway Improvement Project Final Environmental Impact Statement. Prepared for NJSEA. August 2005.
[3] New Jersey has a single rate sales tax for the entire state. The sales tax rate is 7 percent.

Lowe's Home Improvement Center

The largest employer on site is a Lowe's Home Improvement Center, located on the southwest part of the site. Construction began in 2005 and the store opened in 2006. The center employs 150 people and provides an estimated $5.5 million in annual employment income. Since the property's redevelopment, its value has increased from $378,000 to $1.2 million. The business is located on the site's southwest parcel, which generated $20,716 in property tax revenues for Bergen County in 2013.

Figure 10: Lowe's Home Improvement Center

> ***"People just think that 'that is where Lowe's is.' They don't think of it as a Superfund site anymore. The reuse has been a positive thing for the community."***
>
> ***– Doug Tomchuk, EPA Region 2***

Chili's Restaurant

This restaurant is the second largest employer on site. It supports about 70 jobs and generates an estimated $1.4 million in annual employment income.

Figure 11: Chili's restaurant

Starbucks Coffee Shop

One of several businesses located in a retail plaza on site, this coffee shop has been serving beverages and food for around six years. It provides 14 jobs and an estimated $230,000 in annual employment income to the community.

Subway Restaurant

This restaurant, also part of the retail plaza, is located between a Chipotle Mexican Grill and a Five Guys restaurant. The restaurant employs five people and provides the community with an estimated $105,560 in annual employment income.

Figure 12: Businesses in the retail plaza on site

FedEx Office Print & Ship Center

Located at the southern end of the retail plaza, this printing and shipping facility supports five jobs and provides the community with an estimated $308,000 in annual employment income.

Together, development of the retail plaza and the Chili's restaurant on the northwest portion of the site has boosted the property's value from $19.4 million prior to construction to $36 million today. This property generated $635,500 in property tax revenues for Bergen County in 2013.

Meadowlands Rail Line (the Sports Line)

The entire Meadowlands rail line extension, called the Sports Line, is two-and-a-half miles long. Part of it crosses the site. Construction of the entire spur, including the station in the Meadowlands Sports Complex, took four-and-a-half years and supported about 1,100 jobs, during construction. The Sports Line rail service runs about 30 days each year for football games, concerts and other stadium events where attendance exceeds 50,000 people.

Figure 13: The Pascack Valley Line (foreground) and the Sports Line in 2013 (background).

Did You Know?

Thanks to site stakeholder coordination, Superfund cleanup did not significantly affect the Pascack Valley commuter rail line's operations. Between 2003 and 2005, New Jersey Transit cleaned up the rail line's right-of-way on site, with oversight provided by NJDEP and EPA. The rail line continued to operate on a regular schedule during and after the cleanup.

New Jersey Transit has operated the commuter rail service for several decades. The entire line operates between Hoboken, New Jersey, and Spring Valley, New York, covering about 31 miles. There are 19 westbound trains and 22 eastbound trains each weekday, with an average of 6,000 rider trips each week. The closest rail station to the site is the Wood-Ridge station.

Figure 14: Riders of the Sports Line during an event at the Meadowlands Sports Complex (Source: NJSEA, Progress Photos)

Why Reduce Vehicle Miles Traveled (VMT)? [5]

Reducing the number of VMT can have many regional benefits. Some of those benefits include:

- **Savings on fuel and vehicle maintenance costs.**
- **Reduction in time lost from traffic delays.**
- **Reduction in number of highway fatalities and injuries.**
- **Improvements in air quality.**
- **Reduction in greenhouse gas emissions, especially carbon dioxide.**
- **Gains in quality of life from reduced traffic noise and driving stress.**
- **Savings on costs of vehicle ownership.**

During a football game, 10,000 to 12,000 people cross the site on the Sports Line on their way to and from the sports complex. This rail travel replaces an estimated 170,000 vehicle miles travelled and 3,200 vehicle trips per game. In 1999, before construction of the Sports Line, the value of the east-central and eastern parts of the site was about $1.5 million. In 2013, the combined value of the properties was about $7.1 million.[4]

Conclusion

In East Rutherford, New Jersey, EPA, NJSEA, New Jersey Transit, NJDEP, Honeywell International, Inc., and local developers came together to develop integrated remedy and reuse plans that would protect public health, enable public transit opportunities, and provide a new commercial hub in the area. The Universal Oil Products (Chemical Division) Superfund site now hosts stores and restaurants that support jobs and generate tax revenues as well as vital public transit connections. Cleanup of remaining portions of the site will restore local wetlands and other environmentally sensitive areas. Looking to the future, this collaborative effort by EPA and site stakeholders will continue to provide long-term economic, environmental and public transit benefits for Bergen County and surrounding communities.

For more information about the Superfund Redevelopment Initiative (SRI), visit: http://www.epa.gov/superfund/programs/recycle/

[4] These properties are exempt from property taxes.

[5] Analysis of Potential Greenhouse Gas Emission Reductions and Costs of Supporting Recommendations and Related Actions for New Jersey. November 2009. http://www.nj.gov/globalwarming/home/documents/pdf/njgwra_final_report_appendix5_dec2009.pdf

Technical Appendix

Positive Impacts: Employment Information for On-site Jobs
The Dun & Bradstreet (D&B) database provided information on the number of employees and sales volume for on-site businesses. D&B provides information on businesses and corporations. It maintains a database of over 179 million companies globally and over 53 million professional contact names using a variety of sources, including public records, trade references, telecommunication providers, newspapers and publications, and telephone interviews. The Data Universal Numbering System (DUNS) number is a unique nine-digit identification number assigned by D&B to each business and its location within the D&B database for identifying each business.

Positive Impacts: Wage and Income Information for On-site Jobs
The U.S. Bureau of Labor Statistics (BLS) provided wage and income information. The BLS is a governmental statistical agency that collects, processes, analyzes and disseminates essential statistical data to the American public, the U.S. Congress, and other federal agencies in the broad field of labor economics and statistics. The data provided by the BLS has high standards of accuracy and consistently high statistical quality, and impartiality in both subject matter and presentation.

The BLS Quarterly Census of Employment and Wages database provided average weekly wage data for each of the businesses located at the Universal Oil Products (Chemical Division) Superfund site. Average weekly wage data were identified by matching the North American Industry Classification System (NAICS) codes corresponding with each type of business with weekly wage data for corresponding businesses in Bergen County. If not available at the county level, wage data were sought by state or national level, respectively. In cases where wage data were not available for the six-digit NAICS code, higher level (less detailed) NAICS codes were used to obtain the wage data.

To determine the annual wages (mean annual) earned from jobs generated by each of the businesses located at the Universal Oil Products (Chemical Division) Superfund site, the average weekly wage figure was multiplied by the number of weeks in a year (52) and by the number of jobs (employees) for each of the businesses.

For more information on reuse at Superfund sites, please visit: http://www.epa.gov/superfund/programs/recycle/.

Table 1: Universal Oil Products (Chemical Division) Superfund site Businesses: NAICS Code and Title, Average Weekly Wage, Employees, Annual Wages, Total Annual Wage per Employee and Annual Sales

On-site Business	NAICS Code[a]	NAICS Title	Number of Employees[b]	Average Weekly Wage (2012)[d]	Annual Wage (Mean Annual) per Employee	Total Annual Wages[e]	Annual Sales[g]
Asian Grill, The	722513	Limited-Service Restaurants	NA	$317	$16, 484	NA	NA
Beach Bum Tanning	812199[c]	Other Personal Care Services	1[c]	$498	$25,896	$25,896	NA
Chili's, Inc.	722511	Full-Service Restaurants	70	$406	$21,112	$1,477,840	NA
Chipotle Mexican Grill	722513[f]	Limited-Service Restaurants	NA	$317	$16,484	NA	NA
FedEx Office and Print Services, Inc.	323111[c]	Commercial Printing (except Screen and Books)	5[c]	$1, 184	$61,568	$307,840	NA
Five Guys Burgers and Fries	722513	Limited-Service Restaurants	Not Reported	$317	$16,484	NA	NA
Lowe’s Home Centers, Inc.	444110	Home Centers	150	$710	$36,920	$5,538,000	NA
Massage Envy Spa	812199[f]	Massage Parlor	NA	$498	$25,896	NA	NA
Payless Shoes	448210[f]	Shoe Stores	NA	$487	$25,324	NA	NA
Salad Works	722513	Limited-Service Restaurants	Not Reported	$317	$16,484	NA	NA
Sleepy's Reorganization, Inc.	442110	Furniture Stores	1	$782	$40,664	$40,664	NA
Starbucks Corporation	722513	Limited-Service Restaurants	14	$317	$16,484	$230,776	NA
Subway Restaurants	722511[c]	Full-Service Restaurants	5[c]	$406	$21,112	$105,560	NA
Supercuts	812112	Beauty Salons	2	$419	$21,788	$43,576	$69,000
Vitamin Shoppe, The	446191[c]	Food (Health) Supplement Stores	1[c]	$625	$32,500	$32,500	NA
Wireless World	517210[c]	Wireless Telecomms Carriers (Except Satellite)	5[c]	$1,008	$52,416	$262,080	NA

On-site Business	NAICS Code[a]	NAICS Title	Number of Employees[b]	Average Weekly Wage (2012)[d]	Annual Wage (Mean Annual) per Employee	Total Annual Wages[e]	Annual Sales[g]
Total			254			$8,064,732	$69,000

[a] NAICS code provided in D&B unless otherwise noted.
[b] Employee data is from D&B. If D&B indicated a range, the lowest number is used.
[c] Employee data is from Manta. If Manta indicated a range, the lowest number is used.
[d] Average weekly wage per employee is based upon BLS 2012 preliminary Average Weekly Wage data.
[e] Total annual wage figures were derived by multiplying "Employees" by "Annual Wage (Mean Annual) per Employee."
[f] NAICS code was not provided in D&B. Therefore, the NAICS code was selected by matching the general operations of the business with a related NAICS code.
[g] Numbers are included for informational purposes but are not referenced in the case study.
NA: Not Available

Positive Impacts: Property Values and Local Tax Revenue Generated from Property Taxes

Property records and tax amounts were made available by the Bergen County Tax Assessor. Kathleen Winston of the Bergen County Tax Assessor's Office provided the property values for the Universal Oil Products (Chemical Division) Superfund site on June 20, 2013.

Table 2. 2013 Property Values and Annual Tax Amounts for the Universal Oil Products (Chemical Division) Superfund site[1]

Parcel	Current Parcel Owner (2013)	Land Value (2013) ($)	Build Value (2013) ($)	Total Value (2013) ($)	Annual Tax Amount (2013) ($)
Block 104; Lot 1 (*Southwest*)	Vornado Realty Trust	1,194,000	-	1,194,000	20,715.90
Block 104; Lot 2 (*Northwest*)	Vornado Realty Trust	22,125,900	13,887,400	36,013,300	635,524.56
Block 105.01; Lot 8 (*East-Central*)	New Jersey Sports & Exposition Authority (NJSEA)	5,131,300	-	5,131,300	Exempt
Block 105.02; Lot 5 (*Eastern*)	NJSEA	1,987,500	-	1,987,500	Exempt
Totals				44,326,100	656,240.46

[1] Property values presented are estimates obtained from the Bergen County Tax Assessor. The County Assessor separates the land value from the build value, which includes buildings and other structures built on a property. The sum of the land value and the build value equals the total estimated property value.

Table 3. Historic Property Values and Annual Tax Amounts for Block 104; Lot 1 and Lot 2[1]

Parcel	Year	Land Value ($)	Build Value ($)	Total Value ($)	Property Tax ($)	Property Owner
Block 104; Lot 1 (*Southwest*)	2010[2]	1,194,000	-	1,194,000	18,530.88	Honeywell International
	2007	378,000	-	378,000	9,752.40	Honeywell International
	2001	378,000	-	378,000	Exempt	Borough of East Rutherford
	1999	1,194,000	-	1,194,000	22,924.80	EM Sector Holdings
Block 104; Lot 2 (*Northwest*)	2010[2]	22,125,900	13,887,400	36,013,300	558,926.42	Honeywell International
	2007	19,423,000	12,800,000	32,223,000	831,353.40	Honeywell International
	2001	19,423,000	-	19,423,000	400,113.80	EM Sector Holdings
	1999	19,423,000	-	19,423,000	372,921.60	EM Sector Holdings

[1] Property values presented are estimates obtained from the Bergen County Tax Assessor. The County Assessor separates the land value from the build value, which includes buildings and other structures built on a property. The sum of the land value and the build value equals the total estimated property value.
[2] The County Assessor performed a reevaluation of the property during 2010.

Table 4. Historic Property Values and Annual Tax Amounts for Block 105.01; Lot 8, and Block 105.02; Lot 5[1]

Parcel	Year	Land Value ($)	Build Value ($)	Total Value ($)	Property Tax ($)	Property Owner ($)
Block 105.01; Lot 8 (*East-Central*)	2010	5,131,300	-	5,131,300	Exempt	NJSEA
	2009[2]	2,500,000	-	2,500,000	Exempt	NJSEA
	2007	1,085,000	-	1,085,000	Exempt	NJSEA
	1999	1,085,000	-	1,085,000	20,832	Honeywell/UOP
Block 105.02; Lot 5 (*Eastern*)	2010	1,987,500	-	1,987,500	Exempt	NJSEA
	2009[2]	1,008,000	-	1,008,000	Exempt	NJSEA
	2007	484,000	-	484,000	Exempt	NJSEA
	1999	484,000	-	484,000	9,292.80	Honeywell/UOP

[1] Property values presented are estimates obtained from the Bergen County Tax Assessor. The County Assessor separates the land value from the build value, which includes buildings and other structures built on a property. The sum of the land value and the build value equals the total estimated property value.
[2] The County Assessor performed a reevaluation of the property during 2009.