



COLUMBIA CORRIDOR ASSOCIATION

Groundwater Protection Program Fiscal Year 2008-09 Report

The Groundwater Protection Program is a partnership between the Portland Water Bureau, the Columbia Corridor Association, the Cities of Gresham and Fairview, and businesses that operate within the Portland Well Field. All partners have made significant contributions and worked hard to make the program a success.

The ultimate goal of the Groundwater Protection Program is to prevent contamination of City wells that provide the back-up drinking water supply for the area. By working with businesses in the Well Field to implement best management practices, we can protect the Well Field at a reasonable cost to businesses. At the same time, we improve the relationship between the regulator and the regulated.

The Columbia Corridor Association's role is to be the liaison between government and business. We have the experience and we speak the language. In addition, it is hoped that the City can save a significant amount of money by contracting this aspect of the program to a non-profit corporation (CCA is a 501(c)6).

Fiscal Year 2008-09 marked the beginning of a second five-year phase for the program. At this point, all businesses and activities in the Wellfield are covered by the program. We are in the process of updating the five-year-old Reference Manual.

We continue to see an increased level of comfort among businesses with the program goals and a willingness to discuss difficulties with compliance.

As the year progressed, CCA worked closely with the Portland Water Bureau and the Cities of Gresham and Fairview to create the best types of training, workshops, technical assistance and guidance for regulated businesses.

The CCA Well Field Team

Corky Collier is the program manager and CCA contact for the program. Marissa King handles billing. Jeff Dresser of The Bridgewater Group is the primary Well Field expert.

Rosemary DiCandilo is the primary contact at Zero Waste Alliance. Her primary goal is to identify the most dangerous solvents used in the wellfield and attempt to find less toxic substitutes.

Snapshots of the 2008-09 Program

- First case of non-compliance (Specialized Transport)
- Halogenated solvents inventory for the wellfield was lower than expected
- \$131 cost for the average technical assistance call.
- \$5198 total spent on CCA program management for the year.
- 3 public presentations, 1 newsletter article and 7 web pages.
- 1 coordinated attempt to call each regulated business.
- 1 coordination meeting and 1 site training for inspectors
- \$2944 worth of equipment was purchased—used for assistance to regulated businesses and good public relations for the Well Field program.

Technical Assistance

The core of the Well Field Program is the technical assistance we provide to businesses falling under new regulations. We also provide technical assistance to the fire inspectors and water bureaus at the cities of Fairview, Gresham and Portland.

We have three stages of assistance for businesses: phone consultation with CCA, phone consultation with Bridgewater, and on-site consultation. Most questions are answered in phone discussions with the CCA Executive Director. More difficult problems are referred to Bridgewater Group. On-site consultations are the most effective way to achieve proper compliance. In rare cases, a technical interpretation is generated from a complicated question.

In addition to answering questions, phone consultations and site visits are excellent ways to promote the City of Portland's approach to protecting the Well Field. Over the past five years, we have only had one notable case of non-compliance.

Businesses receiving significant technical assistance in FY2008-09:

AG Diesel	Jet Delivery
Altec Industries	Kewit Pacific
Buckaroo Thermaseal	Kruegers Auto
Cereghino Farms	Leatherman
Chevron Gas Station	Magic Detail
Doug Shipman	Parkrose Auto & Truck Repair
Energy Systems NW	ProGrass
EPEDX	Specialized Transport Service
Far West Fibers	Tonkin Distribution Center
Harry's Fresh Foods	USA Performance
Intersys	Waste Express
IR Bobcat	Watersaver Co.
Jeff's SS Auto	

Approximately 25 companies received 53 significant consultations. Some businesses contacted the CCA office with a simple question. These contacts have not been counted.

Companies with Significant Questions	25
Total Consultations Made to Resolve these Questions	53
Average Cost Per Consultation	\$131
Total Cost	\$6952.50

The most common categories of questions:

- Outdoor fuel tank infrastructure
- Which chemicals are regulated
- Adequacy of physical structures
- Reporting forms and requirements

While some questions could have been answered by a more thorough study of the Reference Manual (i.e., which chemicals are regulated), most calls to the CCA office were about difficult and unique situations.

Chemical Evaluation and Data Collection Project by Zero Waste Alliance

Project Goal. The goal of this project was to gather chemical use data for targeted high-risk compounds stored in the Groundwater Protection Area adjacent to the Columbia River, between the cities of Portland and Gresham, Oregon. The purpose of gathering the data was to better understand the types of companies storing and using the compounds, the potential for chemical substitution and the general level of potential threat to the wellfield.

Scope of Work. This work has been conducted for the Columbia Corridor Association and the Portland Water Bureau. The project team included representatives from Zero Waste Alliance (ZWA), the Columbia Corridor Association, the Portland Water Bureau, the City of Gresham and the Bridgewater Group.

In accordance with the February 2009 Phase II Workplan, Zero Waste Alliance has completed the data gathering and analysis of the uses and quantities of the halogenated compounds in the Groundwater Protection Area. Based on the team comments on the February 2009 Workplan, the scope of work was modified and ZWA performed the following steps:

1. refined the list of compounds to be evaluated by reanalysis of the additional 2008 data and compounds by year reported and by company reported;
2. refined the list of companies to be surveyed;
3. developed a telephone script for chemical use data collection;
4. reviewed the subject companies' websites for business type;
5. conducted a telephone survey of the businesses;
6. coordinated with the Portland Water Bureau and companies on lost reports, keying errors and corrections; and
7. updated the database with the type of business or industry and information obtained during the survey.

Deliverables. In addition to this report, the deliverables package for this phase of the project includes the original telephone notes, as requested by Rebecca Geisen of the Portland Water Bureau, and the modified database.

Results. Sixteen (16) companies were identified by the team as candidates for the telephone survey. Boeing was excluded because they have a well-developed chemical substitution program. Kaiser Permanente was excluded because formaldehyde is considered an integral part of their health mission and substitution was outside the scope of this work. Hickory Springs was excluded because the compound toluene diisocyanate (CAS Number 91087) was expected to be a main ingredient in their manufacturing process and also outside the scope of this work. The reported halogenated solvents and the companies reporting them are shown below.

Table 1. All Reported Halogenated Solvents

	CAS #	Compound	Companies reporting 2006-2008	Year last reported the compound	Company Count 2006-2008	Reported as Carcinogen
1	75092	Dichloromethane	Applied Industrial Technology, Boyd Corporation, Chemithon Surface Finishing, Coffey Laboratories, Louis & Company	Coffey (06) Louis (06)	5	yes
2	71556	methyl chloroform	Applied Industrial Technology, Fleet Pride, Sunset Imports East	Sunset Imports (07)	3	
3	43121433	1-(4-chlorophenoxy) 3,3-dimethyl	Simplot (5000 lbs-solid?)	Simplot (06)	1	
4	76131	Ethane, 1,1,2-trichloro-1,2,2,-thrifluoro	Applied Industrial Technology		1	
5	52645531	3-(2,2-Dichloroethenyl)-2,2-dimethylcy	Target Specialty Products		1	
6	75434	Dichlorofluoromethane	Teeny Foods	Teeny (07)	1	
7	76062	Chloropicrin	Osrose Utility Services		1	
8	75456	Chlorodifluoromethane	Townsend Farms	Townsend (07)	1	
9	60207901	1-(2-(2,4-Dichlorophynyl)-4-propyl-1,3	Target Specialty Products		1	
10	811972	1,1,1,2-Tetrafluoroethane	Bridgestone	Bridgestone (07)	1	
11	7637072	Borane, trifluoro	Innovion	Innovion (07)	1	
12	79016	Trichloroethylene	Hertz Rent-a-Car (2004 only)	Hertz (04)	0	yes
13	127184	Perchloroethylene	Boeing, Oregon Hundai Supply	Boeing (07), Oregon Hundai Supply (04)	1	yes
14	75376	Difluoroethane	Target Specialty Products	Target Specialty (07)	1	
Totals					19	

The sixteen companies that were surveyed were:

1. Applied Industrial Technology Distributor
2. Boyd Corporation No longer uses
3. Bridgestone/Firestone Auto Service
4. Chemithon Surface Finishing Distributor
5. Coffey Laboratories Inc. Laboratory
6. Fleet Pride Distributor
7. Hertz Rent a Car Auto Service
8. Innovion Corp Going Out of Business
9. Louis & Company Distributor
10. Oregon Hyundai Supply Distributor
11. Osmose Utilities Services Distributor
12. Simplot Distributor
13. Sunset Imports East Auto Service
14. Target Specialty Products Distributor
15. Teeny Foods Frozen Foods
16. Townsend Farms Raspberry Grower

Out of these 16 companies, eight of them, or 50%, were distributors or storage facilities, which means they do not use the products on site. Seven of the eight are distributors and one, Osmose Utilities Services, is a storage facility for products used to maintain utility lines. The distributors ship their products around the country. One distributor, Target Specialty Products, had reported 30 gallons stored of 2 halogenated compounds, but the database showed 30,000 gallons were stored. This error was corrected as part of the project. Three companies, or 19%, were auto service companies. The auto service companies have mostly switched to the non-chlorinated solvents serviced by Safety Kleen.

Of the five remaining companies, or 31%, that do use the compounds on site, Innovion is going out of business August 2009. They used extremely small amounts and puffed it over circuit boards as part of the manufacturing process. Boyd Corporation no longer uses the compound. Coffey Laboratories, which was sold to Pyxis Laboratories, did not return telephone calls regarding the use of dichloromethane. But dichloromethane is a commonly used laboratory chemical and a common laboratory contaminant.

Finally, Teeny Foods, one of the two food industry companies, does not use the dichlorofluoromethane in their process; the compound is a refrigerant used in R-12. They reported verbally that they do not even use that refrigerant anymore. The next report to the City of Portland is expected to reflect that they do not use the compound. Townsend Farms, the second of the two food industry companies, did not return telephone calls. However, the compound reported by Townsend Farms is chlorodifluoromethane, a hydrochlorofluorocarbon (HCFC). This colorless gas is better known as HCFC-22, R-22. It was also once commonly used as a propellant and in air conditioning applications. These applications are being phased out due to ozone depletion potential and because it is a potent greenhouse gas. It is expected that Townsend Farms used or uses this compound as a refrigerant also.

Conclusions. Based on the current database reviewed and the interviews with the company representatives, the conclusions are:

- the quantities stored or used were smaller than expected, once an error was corrected;
- most companies don't use reported products on-site;
- some of the compounds are refrigerants, which would be gases if used or released;
- the potential threat to the well field and the potential benefit of a widespread substitution effort are low;
- therefore, a substitution program does not appear necessary at this time.

Outreach

Presentations

Two public presentations about the Groundwater Protection Program were made at a ResourceFULL Use event and a Columbia Slough Watershed Council seminar called Slough 101. In addition, the Groundwater Protection Program is frequently referred to as an excellent example of government-business cooperation.

Web Pages

The CCA website has seven pages and links dedicated to Well Field issues. Our phone consultations confirmed that individuals are getting information from these pages. The Well Field information can be found at www.columbiacorridor.org/wellfield.

Telephone Outreach

In May-June 2009, CCA did extensive telephone outreach, attempting to make contact with each business. Most regulated businesses were contacted. Numerous questions were answered and additional site visits were scheduled.

Spill Containment Equipment

Spill kits and secondary containment pallets were purchased for a cost of \$2944. This equipment is distributed free or at reduced price to businesses in need.

CCA purchases spill kits which are given to regulated businesses during site visits and at public workshops. At \$40 each, they are relatively inexpensive ways to create goodwill and insure a functional spill kit is on-site. Spill kits and signs are often handed out upon request and used by inspectors as a way to ease the tension.

Secondary containment pallets and drain covers have been given away to businesses that are having financial difficulty with the program. It's easier to encourage business participation in the program when we can remove the perceived obstacles to that participation.

Secondary containment pallets was distributed to:

- USA Performance
- Altec Industries
- AG Diesel
- Buckaroo Thermaseal
- Specialize Transport
- Kruegers Auto

Drain covers were distributed to:

- Watersaver
- USA Performance

Media

CCA produced a newsletter article on the Well Field program, encouraging compliance and promoting the City-business relationship. The award-winning Groundwater Protection Program is a remarkable

success and should be part of the foundation for continued improvement between the City and local businesses.

Email

We combined our telephone outreach with a request for emails. While our email list hovers around 60% of regulated businesses, it's a step toward creating a list that will help us convey Groundwater Protection information for little cost.

Next Steps

As of last year, all phases of the Groundwater Protection Program have been implemented. This also marks the first year we have needed to take action against a business for inadequate compliance. Technical assistance will remain the core of CCA's efforts. We will continue to build the email list and focus increased attention on businesses that are not in compliance.

CCA will continue to work cooperatively with businesses to minimize the risk of hazardous spills in the Well Field. Our Drop of Prevention program will help Well Field businesses find alternate ways to protect groundwater.

The Portland Water Bureau should be commended for creating the Well Field Protection Program. It was not the simple or obvious direction to go, but it has proven to be the wise direction. Rebecca Geisen has been an excellent program manager and deserves our thanks and compliments.

For questions, please contact Corky Collier at 503.287.8686 or corky@columbiacorridor.org.