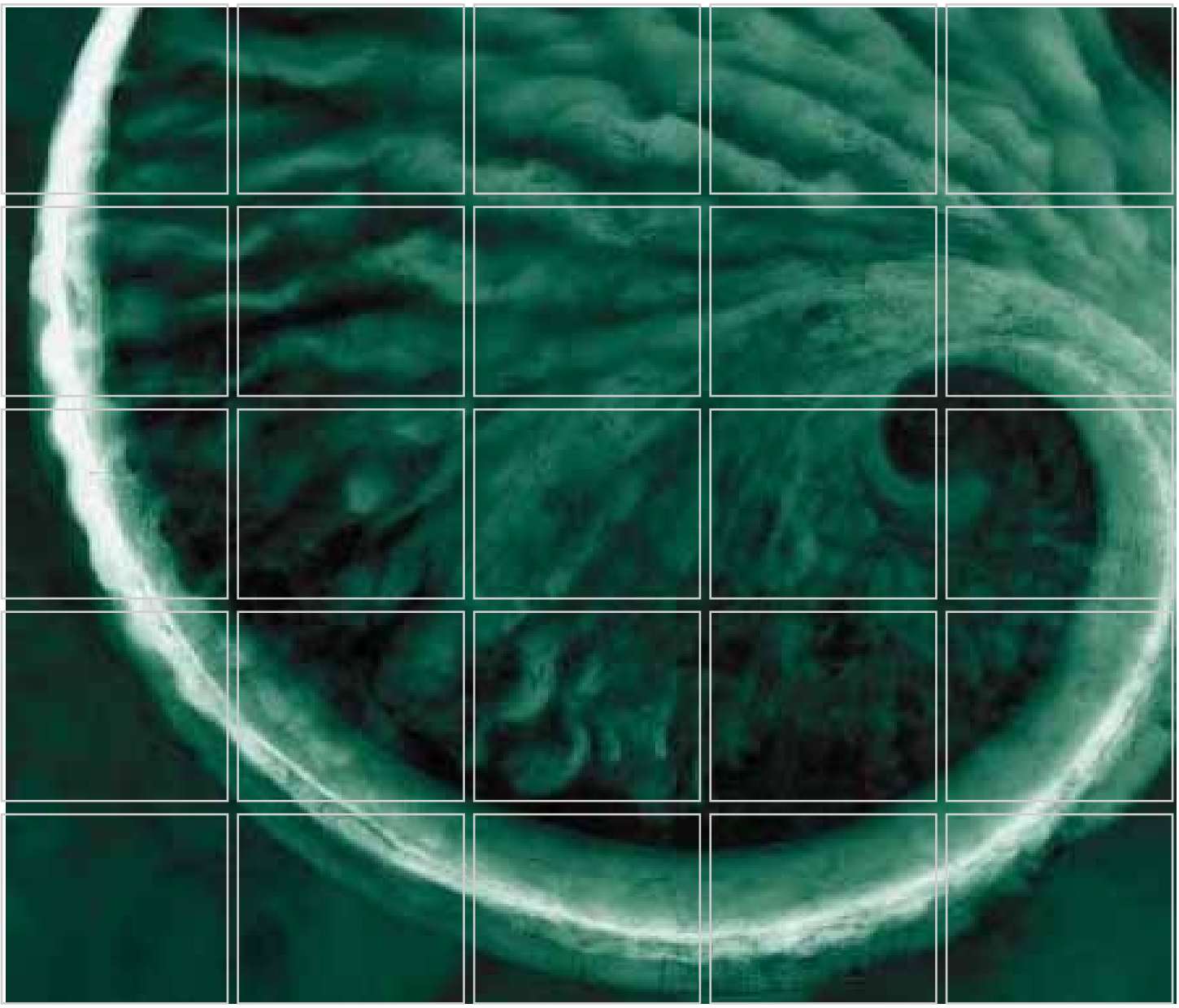

Sitewide Groundwater Monitoring Report – August 2009 Monitoring Event

Arkema, Inc. Facility
Portland, Oregon

February 2010

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Prepared for:
Legacy Site Services, LLC

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Legacy Site Services, LLC

Sitewide Groundwater Monitoring Report – August 2009 Monitoring Event: *Arkema Inc. Facility Portland, Oregon*

February 2010

Project No. 0104584

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LIST OF ACRONYMS

1,2-DCB	1,2-dichlorobenzene
Arkema	Arkema, Inc.
cis-1,2-DCE	cis-1,2-dichloroethene
CMA	Chlorate manufacturing area at Arkema site
Consent Order	The Order on Consent requiring issued by ODEQ, signed 31 October 2008 (DEQ No. LQVC-NWR-08-04)
COC	Constituent of Concern
CVOC	Chlorinated volatile organic compounds
CSM	Conceptual Site Model
Data Gaps Work Plan	*Draft – Data Gap Assessment Work Plan* (ERM 2009a)
DDT	Dichloro diphenyl trichloroethane
DNAPL	Dense non-aqueous phase liquid
ERM	ERM-West, Inc.
FS	Feasibility Study
GIS	Geographical Information System
IRM	Interim Remedial Measure
JSCS	Portland Harbor Joint Source Control Strategy
LSS	Legacy Site Services, LLC.
mg/L	Milligrams per Liter
MPR	Manufacturing process residue
MRL	Method Reporting Limit
ODEQ	Oregon Department of Environmental Quality
PCE	Tetrachloroethene
RCDM	Regenerated Cellulose Dialysis Membrane
RI	Remedial Investigation
RI Report	*Uplands Remedial Investigation Report Lots 3 & 4 and Tract A – Revision 1* (ERM 2005)
RP	Rhone-Poulenc
SCM	Source Control Measure

Silvex	2,4,5-TP
SLLI	StarLink Logistics Inc.
SLV	Screening Level Value
TCE	Trichloroethene
TEQ	Toxicity equivalency quotient
The site	The former Arkema Portland Plant located at 6400 N.W. Front Avenue, Portland, Oregon
µg/L	Micrograms per Liter

1.0 INTRODUCTION

ERM-West, Inc. (ERM) has prepared this report on behalf of Legacy Site Services, LLC (LSS) to summarize the groundwater sampling results for the August 2009 groundwater monitoring event at the Arkema, Inc. (Arkema) facility in Portland, Oregon (the site).

The sampling was conducted in accordance with the *DRAFT – Data Gaps Assessment Work Plan* (ERM 2009a) (Data Gaps Work Plan), dated March 2009, and the *Former Arkema Portland Plant Responses to DEQ/USEPA Comments on Data Gaps Assessment Work Plan ECSI No. 398*, (ERM 2009b) dated 2 July 2009. LSS received written approval from the Oregon Department of Environmental Quality (ODEQ) to conduct groundwater sampling on 7 August 2009. No additional sampling and analysis was performed outside of the ODEQ approved work plan.

1.1 BACKGROUND

The site history is documented in the *Uplands Remedial Investigation Report Lots 3 & 4 and Tract A – Revision 1* (RI report) (ERM 2005). A brief description of the historical activities and sources of groundwater impacts are provided below.

1.1.1 Site Description

The site is located at 6400 N.W. Front Avenue in the Northwest Industrial Area of Portland, Oregon. The facility is bounded by Front Avenue on the north and west, the Willamette River on the east, and an asphalt roofing manufacturer on the south. The site is located on the southwest bank of the lower Willamette River between River mile 6.9 and River mile 7.6, immediately upstream of the Burlington Northern Santa Fe Railroad Bridge in the northwest industrial area of Portland, Oregon (Figure 1). The property is located adjacent to the Portland Harbor Superfund site.

1.1.2 Site History

Inorganic chemicals were manufactured at the site from 1941 until 2001, when the facility was closed and chemical manufacturing was discontinued. For most of the site's history, the chemical activities involved electrolytic decomposition of brine solutions to manufacture inorganic chemicals, including sodium chlorate, chlorine, sodium

hydroxide, hydrogen, and hydrochloric acid. Other chemical manufacturing processes during the site's operational history included the production of dichloro diphenyl trichloroethane (DDT) from 1947 to 1954 and ammonium perchlorate from 1958 to 1962 (ERM 2005).

Decommissioning and removal of the manufacturing infrastructure were completed in early 2005. The only structure remaining is the office building at the site entrance on Front Street and some concrete floor slabs left in place as environmental caps. Arkema maintains leases from the Oregon Department of State Lands for the docks in the Willamette River, but the docks are not currently in use.

Arkema (formerly known as ATOFINA Chemicals, Inc., Elf Atochem North America, Inc., and the Pennwalt Corporation) has conducted investigations and performed a number of Interim Remedial Measures (also referred to as Source Control Measures [SCMs]) in the upland portion of the site since 1994. In 1995, Arkema (then known as Elf Atochem) submitted an intent to participate in the ODEQ Voluntary Cleanup Program, an agreement that was later signed with ODEQ in 1996. In 1998, Arkema signed a voluntary agreement with ODEQ to complete a RI and feasibility study (FS) of the former DDT manufacturing area. The RI/FS was later expanded to include other areas and chemicals at the site (e.g., hexavalent chromium and perchlorate). The RI Report was submitted to ODEQ in December 2005 (ERM 2005).

In May 2008, LSS submitted the *Focused Feasibility Study* for a groundwater SCM at the site (ERM 2008). On 23 February 2009, ODEQ approved the general approach for the groundwater SCM. This approach includes installation of a groundwater barrier wall and a groundwater extraction and treatment system, with treated water discharge to the Willamette River.

Arkema and ODEQ entered into an Administrative Order on Consent on 31 October 2008 (Consent Order) for the upland portion of the site. The upland Consent Order requires submittal of various documents in support of upland source control (groundwater, storm water, and erodible soil) and the upland FS. The Data Gaps Work Plan was one of the documents specified in the Consent Order. The Data Gaps Work Plan identified the need for additional groundwater data to further define potential off-site upgradient contaminant sources, refine the conceptual site model for dioxin and furans, complete the upland FS process, and complete the design of the groundwater SCM.

1.1.3 Hydrogeology

A detailed discussion of the site hydrogeology has been presented in the RI report and as part of the *Draft Groundwater Interim Remedial Measure Focused Feasibility Study* (ERM 2008). A brief description of the site hydrogeology is provided below.

Groundwater occurs within five zones beneath the site: a shallow unconfined upper zone and two confined to semi-confined lower zones (intermediate and deep zones), a gravel alluvium zone (gravel zone), and a basalt zone. The gravel zone is laterally discontinuous at the site, and is only present in the region of Lots 1 and 2. Groundwater at the site flows towards the Willamette River in the shallow, intermediate, deep, and basalt zones. There is no evidence of cross-gradient groundwater flow northwards from Lots 3 and 4 to Lots 1 and 2.

The shallow unconfined groundwater zone is present in the fill and upper sand alluvium from approximately 10 to 38 feet below ground surface. The saturated thickness of the shallow unconfined zone ranges from less than 10 feet near Front Avenue to greater than 15 feet near the Willamette River. The saturated thickness of the shallow zone fluctuates due to seasonal variations of the water table.

A thin discontinuous silt horizon separates the upper alluvial sands from a lower sand unit on a majority of the site. This lower sand unit (referred to as the intermediate sand) comprises the upper portion of the intermediate semi-confined to confined zone at the site. This horizon is referred to as the intermediate groundwater zone and occurs at depths between 36 to 50 feet below ground surface. The intermediate zone generally has a 5-foot to 10-foot saturation thickness across the site and is influenced by fluctuating river conditions (seasonal variations and daily tidal oscillations). The groundwater flow direction is to the northeast toward the Willamette River.

The interval between the intermediate zone and the underlying bedrock basalt is referred to as the deep groundwater zone. This zone consists of predominately fine-grained deposits, and is characterized by significantly lower hydraulic conductivity than the shallow and intermediate zones. The top of the deep zone occurs at approximately 40 to 50 feet below ground surface across the site. The saturation thickness (approximately 5 to 45 feet) of the deep zone is generally controlled by the topography of the basalt bedrock at the site.

The entire site is underlain by basalt bedrock that occurs at depths ranging between 47 and 105 feet below ground surface. The shallowest occurrence of basalt is located near the riverbank, southeast of the RP-02 monitoring well cluster. From the RP-02 cluster, a shallow ridge of basalt extends along the riverbank to the southeastern corner of the site, with the basalt contact sloping away steeply to the southwest toward Front Avenue.

Based on information presented in the *Stage 1 Source Control Evaluation* (AMEC 2006) and *Stage 2 Source Control Evaluation* (AMEC 2007a), the basalt surface is thought to form a large trough that generally parallels Front Avenue in the area of the site, and then curves to the northeast extending to the Siltronic property. At various locations, a layer of deep alluvial gravel has been observed between the basalt and the deep zone within this basalt trough and is known to extend from the Rhone-Poulenc (RP) site to the Arkema site. This gravel zone has a significantly higher hydraulic conductivity than the overlying deep zone and has been identified as a pathway of migration for several contaminants from the RP site (AMEC 2007b, AMEC 2008, and AMEC 2009a).

1.2 OBJECTIVES

The objectives of the sitewide groundwater monitoring were to:

- Collect data to support an evaluation of the updated Conceptual Site Model (CSM) for dioxins/furans at the site;
- Collect data to support the design of the groundwater SCM;
- Collect data to fill data gaps sufficient to evaluate remedial technology alternatives in the uplands FS; and
- Provide additional information regarding the migration (fate and transport) of contaminants from the upgradient RP facility (across N.W. Front Ave) onto the site.

2.0 FIELD PROCEDURES

ERM collected groundwater samples from a total of 100 monitoring wells between 3 and 19 August 2009. The location of the monitoring wells is presented in Figure 1.

Field sampling was performed in accordance with the procedures outlined in the Data Gaps Work Plan (ERM 2009a) and addenda. These procedures cover well purging, field parameter collection, and quality assurance/quality control protocols.

Depths to groundwater were measured in each well on 3 August 2009. The depth to groundwater was used to determine the pump placement within the well screen. Monitoring well, MWA-75i was sampled twice, once near the top and once near the bottom of the screened interval. The wells were purged with a low-flow bladder pump prior to sampling. Field parameters were measured and recorded during purging. Once the field parameters stabilized, the samples were collected in the appropriate containers.

Diffusion sampling techniques were also employed at two wells (MWA-15r and MWA-69) for the purpose of evaluating Regenerated Cellulose Dialysis Membrane (RCDM) bags as an alternative method of sampling for pesticides. The RCDM bags were installed after the wells had been sampled using low flow techniques. The RCDM bags were filled with deionized water, sealed, and suspended within the screened interval of the monitoring well. The bags were retrieved from the wells 2 weeks after deployment. The bags were opened, and the sample transferred directly to the appropriate containers.

Sample preservation, labeling, shipping, and chain-of-custody procedures were in accordance with the Data Gaps Work Plan. The samples were transported to TestAmerica, Inc. laboratories in Portland, Oregon, Sacramento, California, and Tacoma, Washington, under chain-of-custody. The specific analytical methods used are presented in the laboratory reports (Appendix B, electronic only).

3.0 GROUNDWATER MONITORING RESULTS

3.1 GROUNDWATER ELEVATIONS

On 3 August 2009, the depth to groundwater was measured in all groundwater monitoring wells at the site to the nearest 0.01 feet using an electronic water level indicator. The depths to groundwater and the calculated groundwater elevations are presented in Table 1. The depths to groundwater field data sheets are included in Appendix A.

Potentiometric surface maps for the shallow, intermediate, deep, gravel, and basalt zones are presented on Figures 2 through 6, respectively. Groundwater flow direction is generally to the north-northeast across the site in the shallow and intermediate zones. Groundwater flows to the northeast across the site in the deep and basalt zones.

3.2 GROUNDWATER ANALYTICAL RESULTS

3.2.1 Field Parameter Results

Field parameters were measured and recorded during well purging. The monitoring wells were only sampled after the field parameters had stabilized. The results of the field parameter measurement are presented in Table 1.

3.2.2 Analytical Results

The laboratory analytical reports are presented in Appendix B (electronic only). The full data validation report is presented in Appendix C (electronic only). The analytical results for the August 2009 groundwater monitoring event are presented in Tables 2 through 7. Historical analytical results of selected Constituents of Concern (COCs) from both the Arkema and RP sites have been presented previously (ERM 2007). A discussion of primary Arkema and RP site COCs is given below. A limited set of figures is presented in this report. LSS is currently preparing an updated sitewide geographical information system (GIS) database for graphical presentation of historic and recent analytical data for the site. The GIS database will be made available to ODEQ.

3.2.2.1 *Hexavalent Chromium*

The dissolved hexavalent chromium results are presented in Table 6. Results for the shallow, intermediate, and deep zones are shown on Figures 7 through 9, respectively.

The area impacted by hexavalent chromium at the site is associated with the historical use of sodium bichromate from the former Chlorate Cell Room area (chlorate manufacturing area or "CMA") on Lot 4. This area was the target of an Interim Remedial Measure (IRM) between 2005 and 2006, involving the in-situ chemical reduction of hexavalent chromium through injection of calcium polysulfide. The in-situ chemical reduction performance monitoring results were presented in the *Phase 2 Round 4 Performance Monitoring, Hexavalent Chromium Reduction IRM* letter report (ERM 2006).

The concentrations of hexavalent chromium in the shallow zone within the CMA have typically decreased by an order of magnitude from the previous monitoring event conducted in April 2007. The August 2009 results are similar to concentrations observed at the conclusion of the hexavalent chromium reduction IRM, and are approximately 25 percent of baseline concentrations within the CMA (approximate 75 percent reduction on average).

Concentrations in monitoring wells located downgradient of the CMA have generally remained at similar levels to the April 2007 monitoring event. These levels are typically less than 50 percent of the baseline concentrations. All of the shallow monitoring wells in the salt pad area (i.e., MWA-29, -41, -43, and -47) have remained non-detect for hexavalent chromium.

Hexavalent chromium concentrations in the intermediate and deep zones have rebounded to similar levels to those observed prior to the hexavalent chromium reduction IRM. Two of the deep zone monitoring wells had detectable concentrations of hexavalent chromium. Only one well, MWA-31i(d) (with 9.3 milligrams per liter [mg/L]), had a concentration above the Joint Source Control Strategy Screening Level (JSCS SLV) of 0.011 mg/L. This monitoring well has historically had the highest detections of hexavalent chromium in the deep zone.

3.2.2.2 *Perchlorate*

The perchlorate concentrations are presented in Table 7. Results for the shallow, intermediate, and deep zone are presented on Figures 10 through 12, respectively.

Perchlorate in groundwater is associated with historical manufacturing and handling of perchlorate at the site. The highest detections of perchlorate in the shallow and intermediate zones are located immediately to the northeast and downgradient of the former CMA on Lot 4, where perchlorate was manufactured. The shallow-intermediate silt that separates the shallow and intermediate zone is laterally discontinuous in this area and explains the presence of perchlorate in the intermediate and deep zones.

Lesser concentrations of perchlorate are observed within the shallow zone in the former Acid Plant area at the northern end of Lot 4, where perchlorate was historically handled. Concentrations of perchlorate are generally low or non-detect within the intermediate and deep zones in the former Acid Plant area. These results are similar to historical concentrations.

The perchlorate concentrations in the shallow zone have generally decreased by an order of magnitude in the immediate vicinity of the source area. In areas that are downgradient, such as the salt pads, perchlorate concentrations in August 2009 are lower than historical results. Perchlorate concentrations in shallow monitoring wells along the CMA riverbank (MWA-29, -41, -43, and -47) were below detection limits.

Perchlorate concentrations in the intermediate and deep zones within the CMA and salt pads areas have remained somewhat similar, or slightly reduced from historical results.

3.2.2.3 *Chloride*

The chloride concentrations are presented in Table 7. Results for the shallow, intermediate, deep, and basalt zones are presented on Figures 13 through 16, respectively.

The highest chloride concentrations detected on the site are associated with the former salt pads in the former Chlorate area at the southern portion of the site. Detections on the order of 100 mg/L to 12,900 mg/L are present in the shallow and intermediate zones in this area of the site.

The August 2009 groundwater results confirm a continuing trend of reducing chloride concentrations in the CMA and salt pad area over time, especially in the shallow and intermediate zones. Since 2005, chloride concentrations have generally been reduced by approximately 50 percent in both the shallow and intermediate zones.

Detections on the order of 15,000 mg/L to 37,000 mg/L are present in the deep zone within the CMA and salt pad areas this area of the site. The August 2009 groundwater results also confirm a continuing trend of reducing chloride concentrations in the deep zone in this area of the site.

Chloride concentrations on Lots 3 and 4 tend to decrease with distance from the salt pads. Shallow monitoring well MWA-63, which represents the northernmost monitoring well in the developed portion of the site (i.e., Lots 3 and 4), indicated a chloride concentration of 690 mg/L. This level is consistent with historical concentrations observed in the shallow zone throughout Lots 1 and 2, indicating that this area is the northern extent of chloride impacts associated with the salt pads.

During the August 2009 monitoring event, there were significant detections of chloride (up to 8,400 mg/L) observed in the deep, gravel, and basalt zones on Lots 1 and 2. Historical chloride data from off-site, upgradient wells, confirm the presence of an upgradient source of chloride in the vicinity of the former RP facility (ERM 2007). Elevated, upgradient, shallow zone chloride concentrations appear to be migrating downward in to the deeper zones and then flowing on to Lots 1 and 2. StarLink Logistics Inc. (SLLI), the successor for RP, is currently performing additional investigation of the migration pathways between the former RP Portland facility and the Willamette River (AMEC 2009a).

3.2.2.4 Chlorobenzene

The chlorobenzene concentrations are presented in Table 2. Results for the shallow, intermediate, deep, and basalt zones are presented on Figures 17 through 20, respectively.

Chlorobenzene impacts on the site are associated with the former manufacturing process residue (MPR) pond and the chlorobenzene recovery unit, located in the former Acid Plant area on Lot 4. Residual dense non-aqueous phase liquid (DNAPL) has been observed in this area in the shallow and intermediate zones. The DNAPL extent was delineated in the *Draft Acid Plant Area DNAPL Sampling Summary Report* (ERM 2006). The vertical extent of the DNAPL appears to be restricted by the silt

separating the shallow and intermediate zones, as well as the silts and silty sands of the deep zone. Chlorobenzene concentrations tend to decrease with depth in this area.

Chlorobenzene concentrations observed in August 2009 were generally consistent with historical data. The highest chlorobenzene concentrations were observed in the DNAPL area in the shallow and intermediate zones and show a great deal of variability. The chlorobenzene concentrations in wells located outside of the DNAPL area tend to be decreasing over time.

As observed in historical groundwater monitoring events, the chlorobenzene concentrations in the shallow, intermediate, and deep zones decrease rapidly with distance from the MPR pond. The northernmost Former Acid Plant area wells located on Lot 3 (i.e., MWA-5, MWA-14i[d] , and MWA-63), which define the northern extent of the acid plant impacts, have concentrations several orders of magnitude lower than those observed within the source area. No monitoring wells on Lots 2 and 3 had detections of chlorobenzene above the JSCS SLV. This, as well as the known groundwater flow direction, indicates that the chlorobenzene impacts from the MPR pond are limited to only the former Acid Plant area on Lot 4.

The August 2009 and historical chlorobenzene groundwater data clearly indicate Lot 1 chlorobenzene impacts come from an off-site source. Chlorobenzene concentrations on Lot 1 increase with depth. Chlorobenzene impacts to the shallow zone on Lots 1 and 2 are minimal; however, the concentrations observed in the deeper wells (e.g., RP-02-66, RP-08-107, W-19-D) are several orders of magnitude higher than the concentrations observed in wells in the shallow zone of Lots 1 and 2 and the northern portion of the former Acid Plant area (MWA-63, MWA-14i(d), and MWA-5).

The RP Portland facility has been identified as an upgradient source of chlorobenzene impacts to Lots 1 and 2 in the *Draft Source Control Evaluation, RP –Portland Site* (AMEC 2008). Chlorobenzene exists in the shallow and intermediate zones of the RP site and it is migrating down into the deep, gravel and basalt zones, and then onto Arkema Lots 1 and 2. SLLI is currently performing additional investigation of the migration pathways between the former RP Portland facility and the Willamette River (AMEC 2009a). These revisions are anticipated to include clarification of the chlorobenzene migration pathway that passes through Arkema Lots 1 and 2.

3.2.2.5 DDx

The 4,4-DDT, and associated breakdown products 4,4-DDD and 4,4-DDE, (collectively DDx) concentrations are presented in Table 3. Results for the shallow, intermediate, deep, and basalt zones are presented on Figures 21 through 24, respectively. The presence of DDx at the site is associated with the MPR pond in the former Acid Plant area. Although DDx compounds are virtually insoluble in water, its solubility is much greater in the presence of solvents such as chlorobenzene. As a result of this "co-solvency," the footprints of the DDx and chlorobenzene plumes are generally very similar on Lot 4.

The highest DDx concentrations were observed in the area of the MPR pond and where DNAPL has been observed. The DDx concentrations on Lot 4 decrease rapidly with distance from the former MPR pond. This trend is clearly seen in the results from monitoring wells MWA-60, MWA-5, and MWA-63. The August 2009 results were consistent with historical results.

DDx at concentrations below or only slightly above the JSCS SLV of 0.2 micrograms per liter (µg/L) were detected on Lot 1 in the shallow zone (RP-08-23, RP-09-35, and RP-13-11). These low concentrations may be associated with the historical placement of dredge spoils in this area of the site. In addition, the field parameter results indicate that these wells had somewhat elevated turbidity (i.e. above 10 Nephelometric Turbidity Units), which if the dredge spoils contain low levels of DDx, will bias the analytical results high due to the DDx sorbed to the suspended particulates (turbidity) in the sample. DDx was detected at a concentration of 0.007 µg/L in the basalt zone well RP-09-64.

DDx was detected at concentrations below the JSCS SLV in the upgradient shallow and intermediate zone wells located along N.W. Front Ave (MWA-71, -72, -73, -74i, and -75i). These low concentrations may be associated with historic placement of dredge spoils in this area of the site. Other potential sources of DDx in groundwater include the storm sewer for Outfall 22B, located along N.W. Front Avenue, and the former Doane Lake bottom sediments. The historic footprint of Doane Lake was adjacent to, and in some areas, directly beneath Front Avenue. The storm sewer has been known to leak and intercept groundwater from the former RP Portland facility and Doane Lake. Numerous COCs, including DDx, have been detected in this storm sewer at concentrations similar to those observed in the upgradient Arkema wells (AMEC 2009b).

3.2.2.6 *Dioxins and Furans*

Monitoring wells located on Lots 1 and 2, and the furthest upgradient, on-site monitoring wells were sampled for dioxins and furans during the August 2009 sitewide event. The results of the dioxin and furans analyses were used to calculate the toxicity equivalency quotient (TEQ) based on the 2005 World Health Organization toxicity equivalency factors. The TEQ results are presented in Table 5. Results for the shallow, intermediate, deep, and basalt zones are presented in Figures 25 through 28. The figures show the TEQ concentration, as well as the mass ratio of dioxin homologs to furan homologs in each sample.

In the August 2009 event, 28 of the 30 samples had detectable concentrations of congeners used in TEQ calculation. It should be noted that the majority of the detections of dioxin and furan congeners were between the method detection limit (MDL) and the MRL (method reporting limit), or "J" flagged. These results are estimated concentrations.

The August 2009 detections of dioxins/furans in groundwater at the site are characterized by relatively low concentrations and predominately furan compositions. These results are generally consistent with historical results. Two wells (RP-09-35 and MWA-7[i]) had octachlorodibenzo-p-dioxin concentrations greater than 100 picograms/liter, which correspond to approximately 50% of the total mass of dioxins and furans in each sample. These two samples also had the highest TEQ concentrations in August 2009.

LSS is currently conducting soil sampling as part of a data gaps investigation (ERM 2009a). Additional interpretation of the groundwater and soil analytical data, as it relates to the updated dioxin and furan conceptual site model, will be presented in the data gaps investigation report.

3.2.2.7 *Tetrachloroethene, Trichloroethene, Cis-1,2-dichloroethene, and Vinyl Chloride*

The results for tetrachloroethene (PCE) and trichloroethene (TCE), as well as their dechlorination daughter-products cis-1,2-dichloroethene (cis-1,2-DCE) and vinyl chloride are presented in Table 2. Results for the shallow, intermediate, deep, and gravel and basalt zones, are presented on Figures 29 through 32, respectively.

The highest detections of these chlorinated volatile organic compounds (CVOCs) at the site were in the shallow zone in the former Acid Plant

area, and focused around well MWA-67si. The August 2009 concentrations of CVOCs are consistent with historical levels of these compounds. The detections in the former Acid Plant area were generally dominated by PCE. There were also detections in the vicinity of the riverbank in the former Chlorate area that were dominated by PCE and TCE. There were no detections of CVOCs in the deep zone on either Lots 3 or 4. There is no known source of these chlorinated CVOCs at the site, and it is suspected that concentrations in the former Acid Plant area may be associated with the historical fill area.

The highest detections of CVOCs on Lots 1 and 2 were observed in the gravel and basalt zone monitoring wells, and were dominated by cis-1,2-DCE and vinyl chloride. CVOCs were not detected in the shallow zone wells. This pattern is consistent with historical results from Lot 1 and 2.

Elevated detections of CVOCs have been observed at the former RP facility. Historical and recent groundwater data from the RP facility show that concentrations tend to decrease with distance from the RP facility, and gradually become dominated breakdown products of cis-1,2-DCE and vinyl chloride (AMEC 2008). Groundwater migration pathways for TCE, cis-1,2-DCE, and vinyl chloride from the former RP Portland facility to Lots 1 and 2 have been identified in the Draft SCE (AMEC 2008). Additional investigations of the gravel and basalt zones currently being conducted by SLLI (AMEC 2009) are anticipated to further define the extent and nature of RP impacts to the Arkema property.

3.2.2.8 *1,2-Dichlorobenzene*

The 1,2-dichlorobenzene (1,2-DCB) concentrations are presented in Table 2. Results for the shallow, intermediate, deep, and basalt zones are presented on Figures 33 through 36, respectively.

Concentrations of 1,2-DCB detected during the August 2009 monitoring event on Lots 3 and 4 were consistent with historical observations and were predominantly below the detection limit. Only one detection of 1,2-DCB (MWA-9i) at 70 µg/L was above the JSCS SLV of 49 µg/L on Lots 3 and 4.

Detections of 1,2-DCB at concentrations below the JSCS SLV were also noted in the upgradient shallow and intermediate zone wells located along N.W. Front Ave (MWA-71, -72, -73, -74i, and -75i). These concentrations are consistent with historical concentrations in off-site RP

wells W-04-S and W-04-I, located immediately upgradient of Lots 3 and 4, indicating potential migration of 1,2-DCB through the shallow zone onto the site. As discussed previously, leakage from the Outfall 22B storm sewer is another potential migration pathway of contaminants in the shallow zone from the RP facility onto the site (AMEC 2009b).

As in previous monitoring events, the highest 1,2-DCB concentrations in August 2009 observed at the site were in wells screened in the deep zone and the gravel zone, respectively. These wells are located on the northern boundary of Lot 1 and the riverbank.

Migration of 1,2-DCB through groundwater in the deep, gravel, and basalt zones from the RP facility, through the Arkema site, and to the Willamette River has been identified as a source of contamination requiring control under the JSCS (AMEC 2009a). Additionally, 1,2-DCB is considered one of the indicator chemical for the purposes of delineating off-site impacts to groundwater from releases at the RP facility (AMEC 2007b). SLLI is currently performing additional investigations to define the nature and extent of 1,2-DCB (and other RP contaminants) in groundwater. This work is being conducted under an ODEQ-approved work plan as part of an interim source control measure.

3.2.2.9 2,4,5-TP

The pesticide 2,4,5-TP (silvex) concentrations are presented in Table 3. Results for the shallow, intermediate, deep, and basalt zones are presented on Figures 37 through 40, respectively. Samples collected from Lots 1 and 2 monitoring wells and the upgradient wells located along N.W. Front Ave, were analyzed for silvex. Silvex is not a COC at the Arkema site; however, it is a known COC at the RP site. The distribution of silvex on Lots 1 and 2 was similar to that seen for other organic compounds (i.e. 1,2-DCB) that are migrating in groundwater from the RP site. The highest concentrations were observed in the deep, gravel, and basalt zone monitoring wells in the RP-08, RP-13, and W-19 clusters. Silvex was not detected in any of the shallow zone wells.

3.2.3 RCDM Bag Sampling Results

Two wells (MWA-15r and MWA-69) were sampled by diffusion methods using RCDM bags. These two samples were analyzed for pesticides. The RCDM bag sample results and corresponding low flow sampling results for pesticide detections are presented in Table 8.

In both samples, the RCDM bag results were not similar to the low flow sampling results. In MWA-15r, the DDD, DDE, and DDT concentrations in the RCDM sample were between 2.5 to 7 times higher than the low flow sample results. In MWA-69, the RCDM bag sample results were approximately 10 times lower than the low flow sample results.

The cause of the variation in sample results is not clear. RCDM bags have been used to sample for other compounds with low solubility and high affinity for soil sorption, such as metals. RCDM bags have not previously been used for pesticide sampling at any site. Influences that may contribute to the variability in DDT concentrations, , include the potential contact with DNAPL in the monitoring well, the location of the RCDM bag in the well screen, the location of low flow pump intake in the well screen, and chemical interferences between the RCDM membrane and the target compounds. Some of these interferences may also deteriorate the integrity or the diffusion characteristics of the membrane. Additional laboratory and field studies would be required to determine the applicability of RCDM bag sampling for analysis of pesticides in groundwater under conditions present at the Arkema site.

4.0 CONCLUSIONS

In general, the results of the August 2009 sitewide groundwater monitoring event confirmed the previously determined extent of COCs in the former Acid Plant area and the CMA for contaminants such as perchlorate, chloride, chlorobenzene, DDx, and hexavalent chromium. These contaminants are predominately localized on Lot 4, and their northernmost extent is bounded by the proposed groundwater SCM. Current concentrations of COCs within the conceptual capture zone of the groundwater SCM are consistent with the proposed design range for the groundwater extraction and treatment system.

LSS is conducting additional investigation to close identified data gaps in the dioxin and furan CSM. Additional interpretation of the groundwater monitoring results will be presented as part of the data gaps investigation report and CSM update.

Constituent concentrations on Lots 1, 2, and a large portion of Lot 3 increase with depth and are the result of impacts from off-site source(s). The August 2009 results confirm that contaminant migration from off-site sources of CVOCs, 1,2-dichlorobenzene, chloride, herbicides, and dioxins/furans onto Lots 1, 2, and a large portion of Lot 3 is occurring. Interim source control measures, such as the repairs of the Outfall 22B storm sewer, have been implemented to attempt to prevent groundwater interception and control further migration of contaminants from the RP facility to the Willamette River. LSS notes that the sealing of the city sewer line could exacerbate the flow of RP contamination onto the Arkema site, as the storm sewer will no longer intercept contaminated groundwater. LSS additionally notes that SLLI, under DEQ guidance, is currently developing a source control measure for groundwater contamination in the gravel and basalt zone. LSS also notes that SLLI is currently performing additional investigations to determine the nature and extent of the impacts in the shallow and intermediate zones.

As newer data from these on-going off-site investigations becomes available, ERM will evaluate and incorporate them into the conceptual site model.

5.0 REFERENCES

AMEC Earth & Environmental (AMEC). 2006. *Stage 1 Source Control Evaluation Technical Memorandum, RP- Portland Site*, May 2006.

AMEC. 2007a. *Stage 2 Source Control Evaluation Technical Memorandum, RP – Portland Site, June 2007.*

AMEC. 2007b. *Evaluation of Groundwater Discharge to the Willamette River, RP - Portland Site.* October 2007.

AMEC. 2008. *Draft Source Control Evaluation Report, RP - Portland Site.* February 2008.

AMEC. 2009a. *Initial Deep Hydrogeologic Zone Pumping Test Technical Memorandum and Extended Pumping Test Work Plan, RP – Portland Site.* January 2009.

AMEC. 2009b. *2008 Outfall 22B Manhole and Catchbasin Sampling Data Submittal, RP - Portland Site*. March 2009.

ERM-West, Inc. (ERM). 2005. *Upland Remedial Investigation Report Lots 3 & 4 and Tract A – Revision 1*. December 2005.

ERM. 2006a. *Draft Acid Plant Area DNAPL Sampling Summary Report.* April 2006.

ERM. 2006b. *Phase 2 Round 4 Performance Monitoring, Hexavalent Chromium Reduction IRM.* October 2006.

ERM. 2007. *Sitewide Groundwater Monitoring Report – April 2007 Monitoring Event*. October 2007.

ERM. 2008. *Draft Focused Feasibility Study, Groundwater Source Control Interim Remedial Measure.* May 2008.

ERM. 2009a. *Draft Data Gaps Assessment Work Plan*. March 2009.

ERM. 2009b. *Former Arkema Portland Plant Responses to DEQ/USEPA Comments*. August 2009.

Oregon Department of Environmental Quality. 2005. *Portland Harbor Joint Source Control Strategy*. December 2005.

Figures

Project Number: 0104584

Date: 11/18/2009

Created By: mike.appel

File: F:\RM106\ERM West\Arkema\0104584 GW Monitoring Aug 2009\MAPS\Figures1007\SamplingLocations.mxd

LEGEND

Monitoring Wells Sampled During the August 2009 Event

- Shallow Aquifer
- Intermediate Aquifer
- Deep Gravel Aquifer
- Basalt Aquifer

200 100 0 200 Feet

Scale 1:2,400

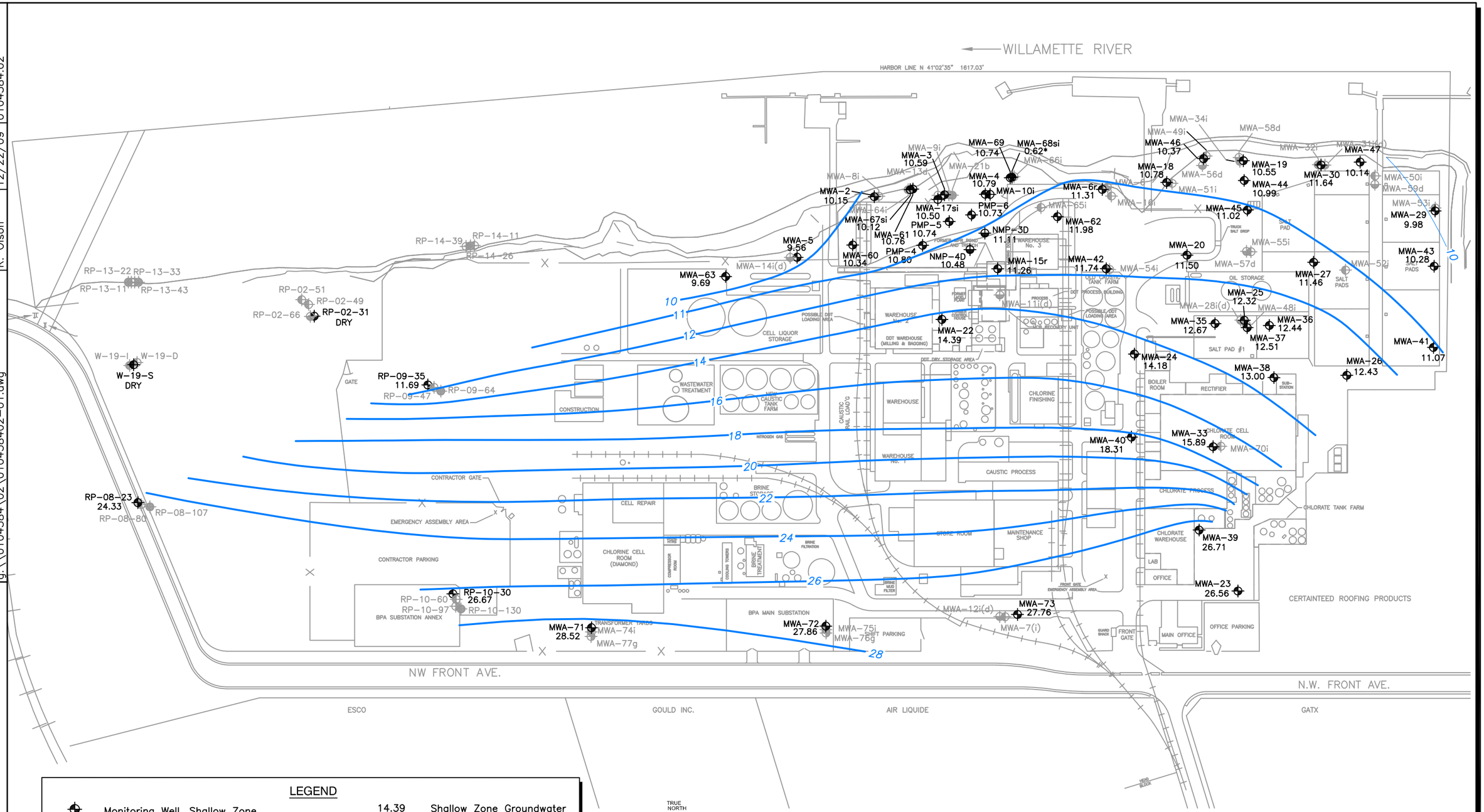
N

Aerial Photography: July 2005

FIGURE 1
Site Layout and Sampling Locations
August 2009
Arkema, Portland, OR

ERM 11/09

Project No. 0104584.02
Date: 12/22/09
Drawn By: R. Olson
CAD File: g:\0104584\02\010458402-01.dwg



LEGEND

- Monitoring Well, Shallow Zone
- Monitoring Well, Shallow–Intermediate Zone
- Monitoring Well, Intermediate Zone
- Monitoring Well, Deep Zone
- Monitoring Well, Gravel Zone
- Monitoring Well, Basalt

14.39 — Shallow Zone Groundwater Elevation (ft. amsl)

0.62* — Anomalous Datum; Not Used for Contouring

14 — Shallow Zone Groundwater Elevation Contour

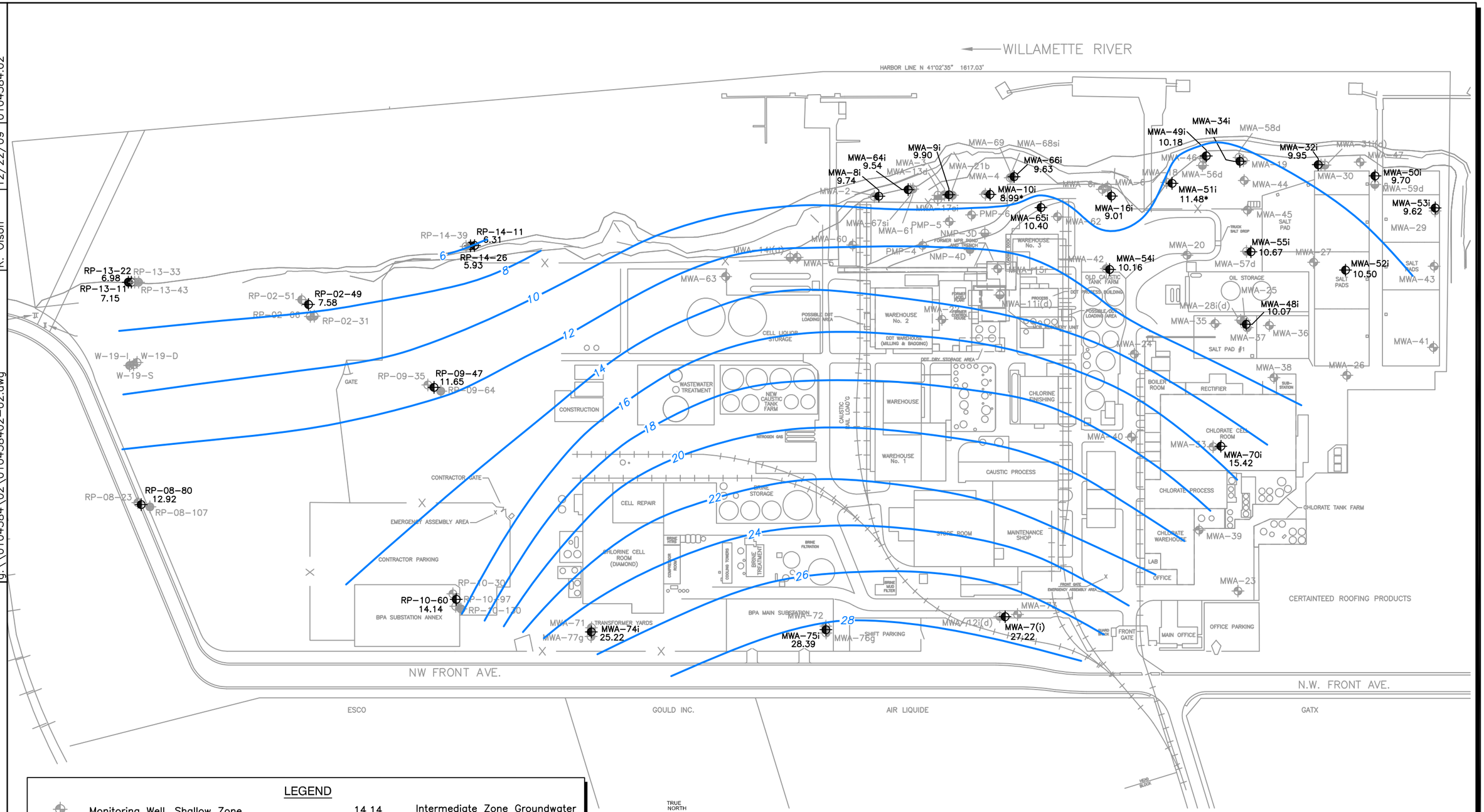
Note:
Most buildings and structures noted on this diagram have been demolished and/or removed.

TRUE NORTH
PLANT NORTH
0 200
FEET

Figure 2
Groundwater Elevation Contour Map - Shallow Zone
Site Wide Ground Water Monitoring
Arkema Inc.
Portland, Oregon

ERM 12/09

Project No. 0104584.02
Date: 12/22/09
Drawn By: R. Olson
CAD File: g:\0104584\02\010458402-02.dwg



LEGEND

- Monitoring Well, Shallow Zone
- Monitoring Well, Shallow–Intermediate Zone
- Monitoring Well, Intermediate Zone
- Monitoring Well, Deep Zone
- Monitoring Well, Gravel Zone
- Monitoring Well, Basalt

14.14 — Intermediate Zone Groundwater Elevation (ft. amsl)

8.99* — Anomalous Datum; Not Used for Contouring

14 — Intermediate Zone Groundwater Elevation Contour

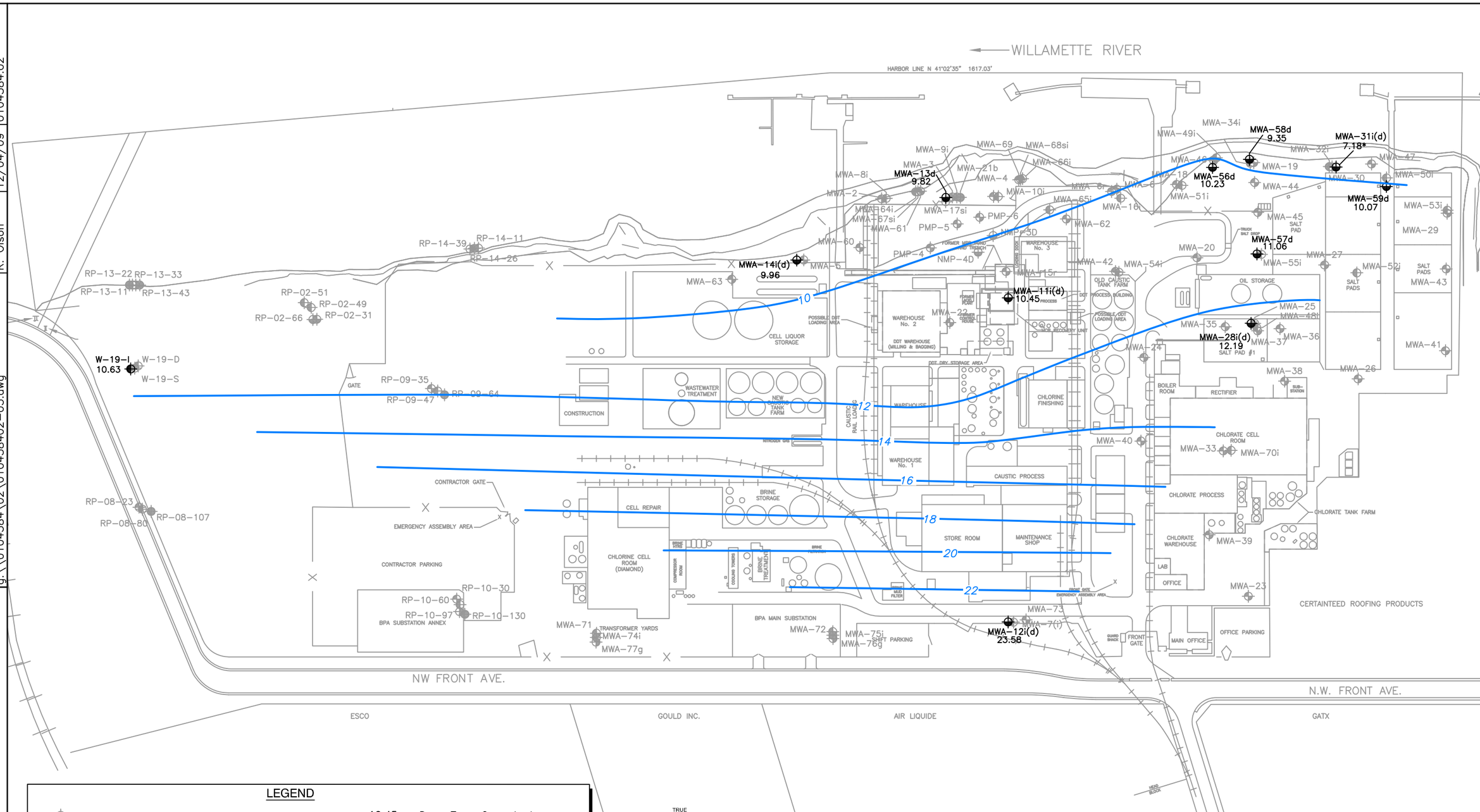
Note:
Most buildings and structures noted on this diagram have been demolished and/or removed.

TRUE NORTH
PLANT NORTH
0 200
FEET

Figure 3
Groundwater Elevation Contour Map - Intermediate Zone
Site Wide Ground Water Monitoring
Arkema Inc.
Portland, Oregon

ERM 12/09

Project No. 0104584.02
Date: 12/04/09
Drawn By: R. Olson
CAD File: g:\0104584\02\0104584-03.dwg



LEGEND

- Monitoring Well, Shallow Zone
- Monitoring Well, Shallow–Intermediate Zone
- Monitoring Well, Intermediate Zone
- Monitoring Well, Deep Zone
- Monitoring Well, Gravel Zone
- Monitoring Well, Basalt

10.45 — Deep Zone Groundwater Elevation (ft. amsl)

7.18* — Anomalous Datum; Not Used for Contouring

10 — Deep Zone Groundwater Elevation Contour

Note:
Most buildings and structures noted on this diagram have been demolished and/or removed.

TRUE NORTH
PLANT NORTH
0 200
FEET

Figure 4
Groundwater Elevation Contour Map - Deep Zone
Site Wide Ground Water Monitoring
Arkema Inc.
Portland, Oregon

ERM 12/09

Project No. 0104584.02
Date: 12/04/09
Drawn By: R. Olson
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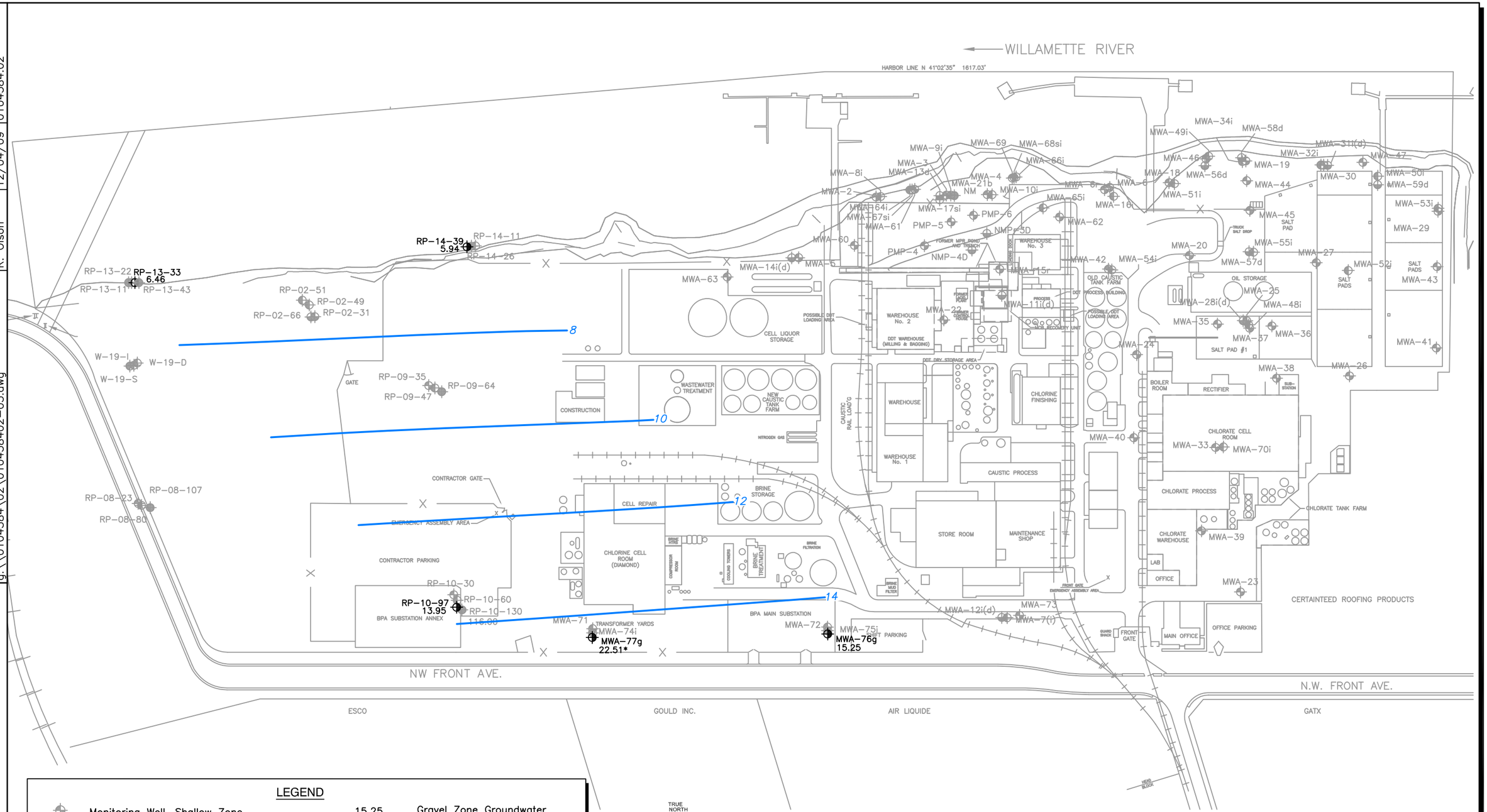


LEGEND

- Monitoring Well, Shallow Zone
- Monitoring Well, Shallow–Intermediate Zone
- Monitoring Well, Intermediate Zone
- Monitoring Well, Deep Zone
- Monitoring Well, Gravel Zone
- Monitoring Well, Basalt

15.25 — Gravel Zone Groundwater Elevation (ft. amsl)

22.51* — Anomalous Datum; Not Used for Contouring

14 — Gravel Zone Groundwater Elevation Contour

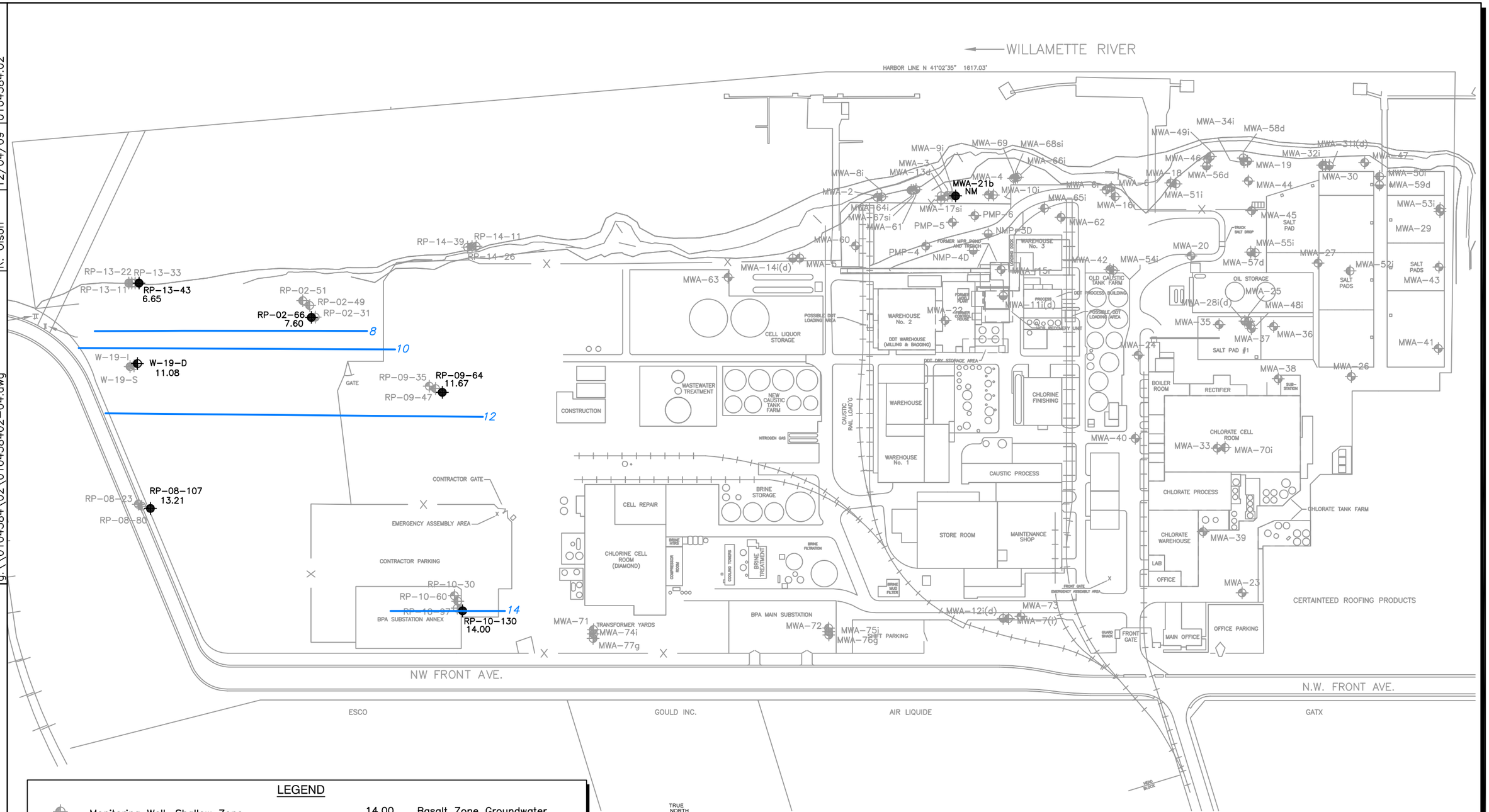
Note:
Most buildings and structures noted on this diagram have been demolished and/or removed.

Figure 5

Groundwater Elevation Contour Map - Gravel Zone
Site Wide Ground Water Monitoring
Arkema Inc.
Portland, Oregon

ERM 12/09

Project No. 0104584.02
Date: 12/04/09
Drawn By: R. Olson
CAD File: g:\0104584\02\01045840 2-04.dwg



LEGEND

- Monitoring Well, Shallow Zone
- Monitoring Well, Shallow–Intermediate Zone
- Monitoring Well, Intermediate Zone
- Monitoring Well, Deep Zone
- Monitoring Well, Gravel Zone
- Monitoring Well, Basalt

14.00 — Basalt Zone Groundwater Elevation (ft. amsl)

NM — Not Measured

14 — Basalt Zone Groundwater Elevation Contour

Note:
Most buildings and structures noted on this diagram have been demolished and/or removed.

Figure 6
Groundwater Elevation Contour Map - Basalt Zone
Site Wide Ground Water Monitoring
Arkema Inc.
Portland, Oregon

ERM 12/09

Project Number: 0104584

Date: 01/13/2010

Created By: mike.appel

File: F:\RM106\E\ERM West\Arkema\0104584 GW Monitoring Aug 2009\1209Figures\HexChromeShallow.mxd

LEGEND

Hexavalent Chromium Concentration (µg/l)

- < 11 (JSCS Screening Criteria = 11 µg/l)
- 11 - 110 (DEQ Screening Criteria = 110 µg/l)
- 110 - 1,000
- 1,000 - 10,000
- > 10,000
- Not detected

200 100 0 200 Feet

Scale 1:2,400

N

Aerial Photography: July 2005

FIGURE 7
Hexavalent Chromium Groundwater Concentrations
Shallow Zone
August 2009
Arkema, Portland, OR

ERM 11/09

Project Number: 0104584

Date: 01/13/2010

Created By: mike.appel

File: F:\RM106\EERM West\Arkema\0104584 GW Monitoring Aug 2009\1209Figures\HexChromeIntermediate.mxd

LEGEND

Hexavalent Chromium Concentration (µg/l)

- < 11 (JSCS Screening Criteria = 11 µg/l)
- 11 - 110 (DEQ Screening Criteria = 110 µg/l)
- 110 - 1,000
- 1,000 - 10,000
- > 10,000
- Not detected

200 100 0 200 Feet

Scale 1:2,400

N

Aerial Photography: July 2005

FIGURE 8
Hexavalent Chromium Groundwater Concentrations
Intermediate Zone
August 2009
Arkema, Portland, OR

ERM 11/09

Project Number: 0104584

Date: 01/13/2010

Created By: mike.appel

File: F:\RM106\EIERM West\Arkema\0104584 GW Monitoring Aug 2009\1209Figures\HexChromeDeep.mxd

LEGEND

Hexavalent Chromium Concentration (µg/l)

- < 11 (JSCS Screening Criteria = 11 µg/l)
- 11 - 110 (DEQ Screening Criteria = 110 µg/l)
- 110 - 1,000
- 1,000 - 10,000
- > 10,000
- Not detected

200 100 0 200 Feet

Scale 1:2,400

N

Aerial Photography: July 2005

FIGURE 9
Hexavalent Chromium Groundwater Concentrations
Deep Zone
August 2009
Arkema, Portland, OR

ERM 11/09

Project Number: 0104584

Date: 01/13/2010

Created By: simon.ross

File: F:\RM106\EERM West\Arkema\0104584 GW Monitoring Aug 2009\1209Figures\PerchlorateShallow.mxd

LEGEND

Perchlorate Concentration (µg/l)

- < 36 (JSCS Screening Criteria = 36 µg/l)
- 36 - 100 (DEQ Screening Criteria = 24.5 µg/l)
- 100 - 1,000
- 1,000 - 10,000
- 10,000 - 100,000
- > 100,000
- Not detected

200 100 0 200 Feet

Scale 1:2,400

N

Aerial Photography: July 2005

FIGURE 10
Perchlorate Groundwater Concentrations
Shallow Aquifer
August 2009
Arkema, Portland, OR

ERM 03/07

Project Number: 0104584

Date: 01/14/2010

Created By: mike.appel

File: F:\RM106\EIERM West\Arkema\0104584 GW Monitoring Aug 2009\1209Figures\PerchlorateIntermediate.mxd

LEGEND

Perchlorate Concentration (µg/l)

- < 36 (JSCS Screening Criteria = 36 µg/l)
- 36 - 100 (DEQ Screening Criteria = 24.5 µg/l)
- 100 - 1,000
- 1,000 - 10,000
- 10,000 - 100,000
- > 100,000
- Not detected

200 100 0 200 Feet

Scale 1:2,400

N

Aerial Photography: July 2005

FIGURE 11
Perchlorate Groundwater Concentrations
Intermediate Zone
August 2009
Arkema, Portland, OR

ERM 03/07

Project Number: 0104584

Date: 01/14/2010

Created By: mike.appel

File: F:\RM106\EIERM West\Arkema\0104584 GW Monitoring Aug 2009\1209Figures\PerchlorateDeep.mxd

LEGEND

Perchlorate Concentration (µg/l)

- < 36 (JSCS Screening Criteria = 36 µg/l)
- 36 - 100 (DEQ Screening Criteria = 24.5 µg/l)
- 100 - 1,000
- 1,000 - 10,000
- 10,000 - 100,000
- > 100,000
- Not detected

200 100 0 200 Feet

Scale 1:2,400

N

Aerial Photography: July 2005

FIGURE 12
Perchlorate Groundwater Concentrations
Deep Zone
August 2009
Arkema, Portland, OR

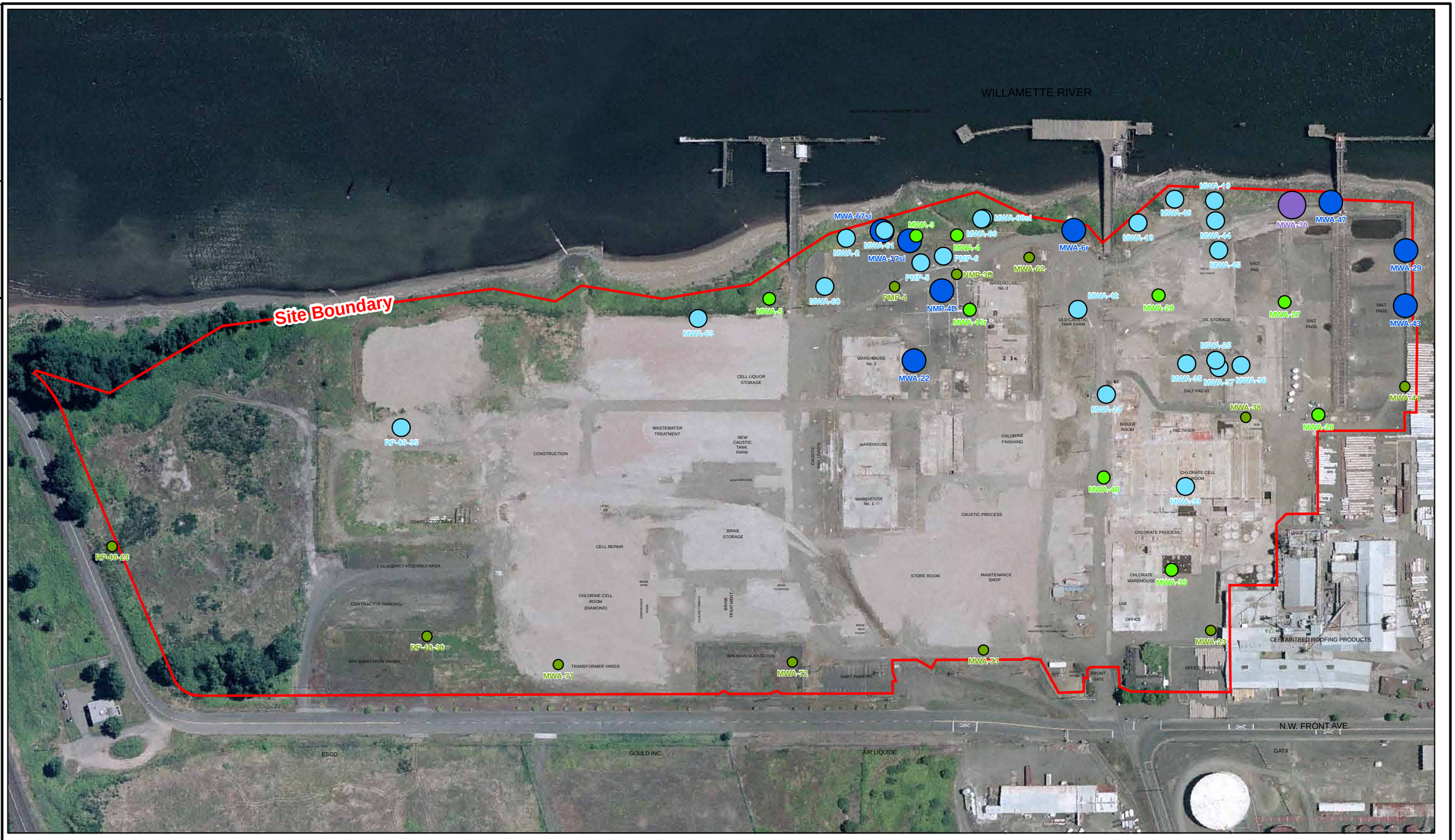
ERM 03/07

Project Number: 0104584

Date: 01/14/2010

Created By: simon.ross

File: F:\RM106\ERM West\Arkema\0104584 GW Monitoring Aug 2009\1209Figures\ChlorideShallow.mxd



LEGEND

Chloride Concentration (mg/l)

- < 100
- 100 - 230 (JSCS Screening Criteria = 230 mg/l)
- 230 - 1,000
- 1,000 - 10,000
- 10,000 - 100,000
- > 100,000
- Not detected

200 100 0 200 Feet

Scale 1:2,400

Aerial Photography: July 2005

FIGURE 13
Chloride Groundwater Concentrations
Shallow Zone
August 2009
Arkema, Portland, OR

ERM 11/09

Project Number: 0104584

Date: 01/14/2010

Created By: simon.ross

File: F:\RM106\ERM West\Arkema\0104584 GW Monitoring Aug 2009\1209Figures\ChlorideIntermediate.mxd

LEGEND

Chloride Concentration (mg/l)

- < 100
- 100 - 230 (JSCS Screening Criteria = 230 mg/l)
- 230 - 1,000
- 1,000 - 10,000
- 10,000 - 100,000
- > 100,000
- Not detected

200 100 0 200 Feet

Scale 1:2,400

N

Aerial Photography: July 2005

FIGURE 14
Chloride Groundwater Concentrations
Intermediate Zone
August 2009
Arkema, Portland, OR

ERM 11/09

Project Number: 0104584

Date: 01/14/2010

Created By: simon.ross

File: F:\RM106\ERM West\Arkema\0104584 GW Monitoring Aug 2009\1209Figures\ChlorideDeep.mxd

LEGEND

Chloride Concentration (mg/l)

- < 100
- 100 - 230 (JSCS Screening Criteria = 230 mg/l)
- 230 - 1,000
- 1,000 - 10,000
- 10,000 - 100,000
- > 100,000
- Not detected

200 100 0 200 Feet

Scale 1:2,400

N

Aerial Photography: July 2005

FIGURE 15
Chloride Groundwater Concentrations
Deep Zone
August 2009
Arkema, Portland, OR

ERM 11/09

Project Number: 0104584

Date: 01/14/2010

Created By: simon.ross

File: F:\RM106\ERM West\Arkema\0104584 GW Monitoring Aug 2009\1209Figures\ChlorideBasalt.mxd

LEGEND

Chloride Concentration (mg/l)

- < 100
- 100 - 230 (JSCS Screening Criteria = 230 mg/l)
- 230 - 1,000
- 1,000 - 10,000
- 10,000 - 100,000
- > 100,000
- Not detected

200 100 0 200 Feet

Scale 1:2,400

N

Aerial Photography: July 2005

FIGURE 16
Chloride Groundwater Concentrations
Gravel and Basalt Zones
August 2009
Arkema, Portland, OR

ERM 11/09

Project Number: 0104584

Date: 01/14/2010

Created By: mike.appel

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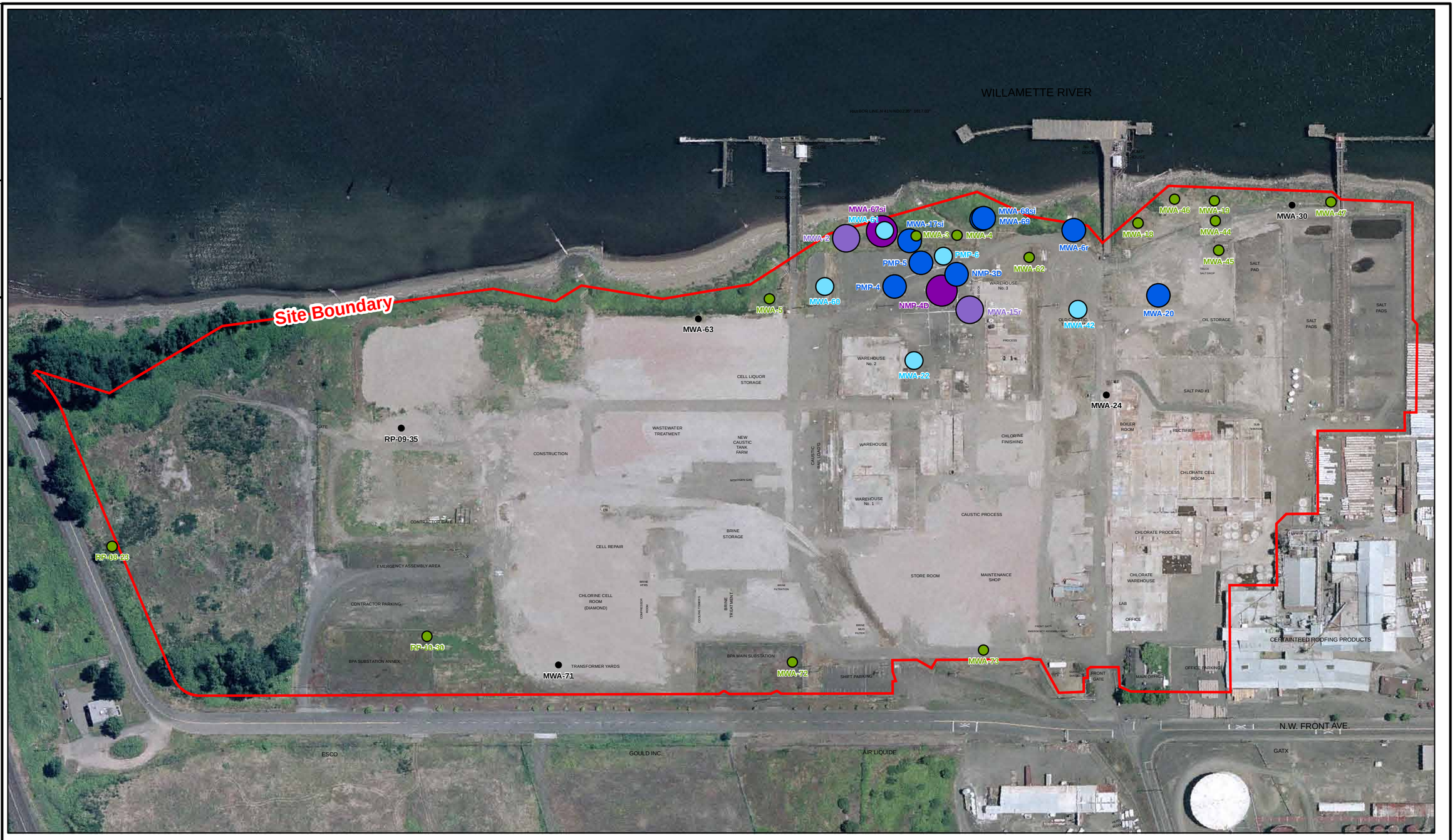

LEGEND

Chlorobenzene Concentration (µg/l)

- < 50 (JSCS Screening Criteria = 50 µg/l)
- 50 - 100 (DEQ Screening Criteria = 100 µg/l)
- 100 - 1,000
- 1,000 - 10,000
- 10,000 - 100,000
- > 100,000
- Not detected

200 100 0 200 Feet

Scale 1:2,400

N

Aerial Photography: July 2005

FIGURE 17
Chlorobenzene Groundwater Concentrations
Shallow Zone
August 2009
Arkema, Portland, OR

ERM 03/07

Project Number: 0104584

Date: 01/14/2010

Created By: mike.appel

File: F:\RM106\E\ERM West\Arkema\0104584 GW Monitoring Aug 2009\1209Figures\ChlorobenzeneIntermediate.mxd

LEGEND

Chlorobenzene Concentration (µg/l)

- < 50 (JSCS Screening Criteria = 50 µg/l)
- 50 - 100 (DEQ Screening Criteria = 100 µg/l)
- 100 - 1,000
- 1,000 - 10,000
- 10,000 - 100,000
- > 100,000
- Not detected

200 100 0 200 Feet

Scale 1:2,400

N

Aerial Photography: July 2005

FIGURE 18
Chlorobenzene Groundwater Concentrations
Intermediate Zone
August 2009
Arkema, Portland, OR

ERM 11/09

Project Number: 0104584

Date: 01/14/2010

Created By: mike.appel

File: F:\RM106\ERM West\Arkema\0104584 GW Monitoring Aug 2009\1209Figures\ChlorobenzeneDeep.mxd

LEGEND

Chlorobenzene Concentration (µg/l)

- < 50 (JSCS Screening Criteria = 50 µg/l)
- 50 - 100 (DEQ Screening Criteria = 100 µg/l)
- 100 - 1,000
- 1,000 - 10,000
- 10,000 - 100,000
- > 100,000
- Not detected

200 100 0 200 Feet

Scale 1:2,400

N

Aerial Photography: July 2005

FIGURE 19
Chlorobenzene Groundwater Concentrations
Deep Zone
August 2009
Arkema, Portland, OR

ERM 11/09

Project Number: 0104584

Date: 01/14/2010

Created By: mike.appel

File: F:\RM106\E\ERM West\Arkema\0104584 GW Monitoring Aug 2009\1209Figures\ChlorobenzeneBasalt.mxd

LEGEND

Chlorobenzene Concentration (µg/l)

- < 50 (JSCS Screening Criteria = 50 µg/l)
- 50 - 100 (DEQ Screening Criteria = 100 µg/l)
- 100 - 1,000
- 1,000 - 10,000
- 10,000 - 100,000
- > 100,000
- Not detected

200 100 0 200 Feet

Scale 1:2,400

N

Aerial Photography: July 2005

FIGURE 20
Chlorobenzene Groundwater Concentrations
Gravel and Basalt Zones
August 2009
Arkema, Portland, OR

ERM 11/09

Project Number: 0104584

Date: 01/14/2010

Created By: mike.appel

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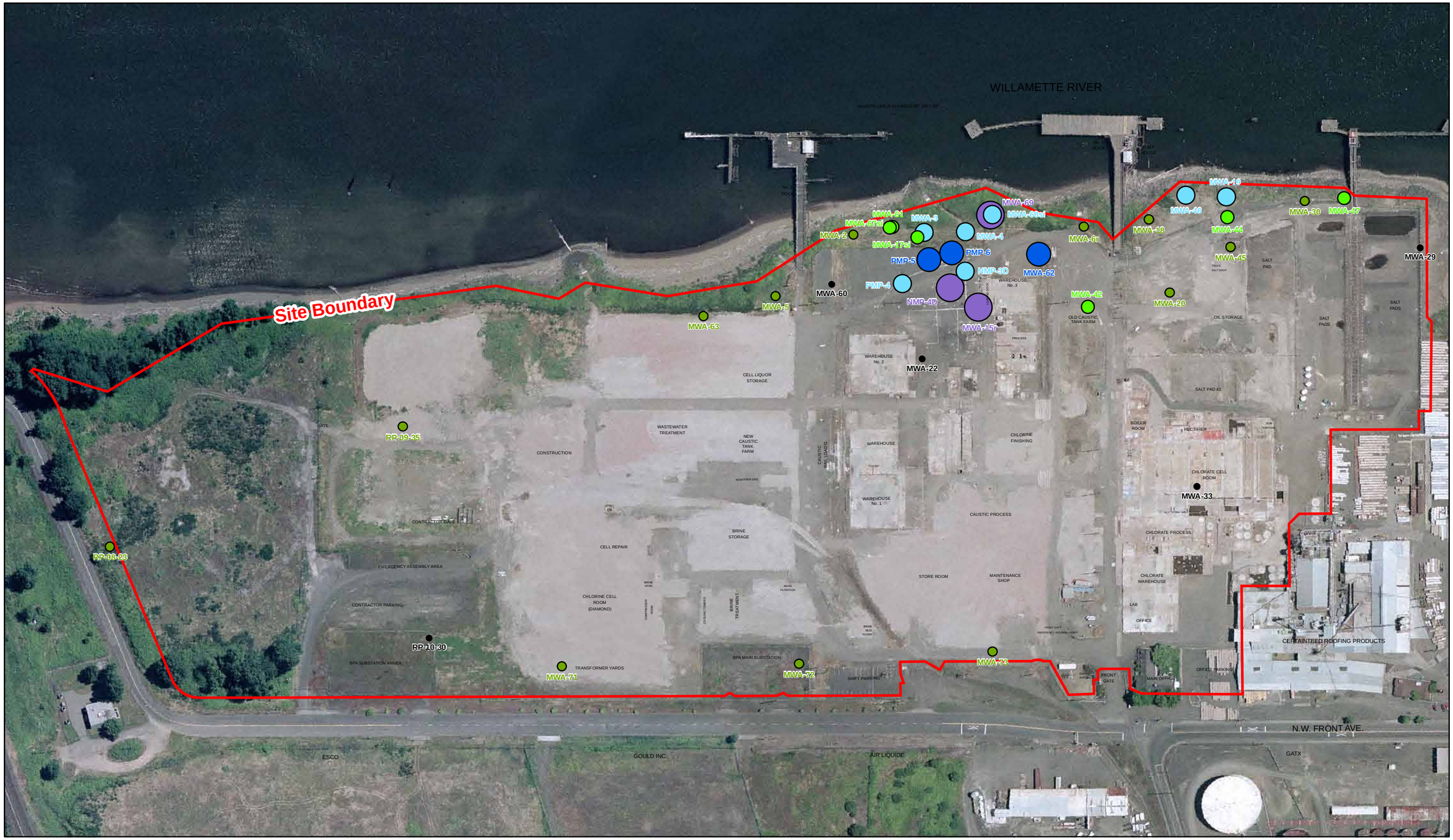


LEGEND

DDx Concentration (µg/l)

- < 0.2 (DEQ Screening Criteria = 0.2 µg/l)
- 0.2 - 1
- 1 - 10
- 10 - 100
- 100 - 1,000
- > 1,000
- Not detected

Scale 1:2,400

200 100 0 200 Feet

N

Aerial Photography: July 2005

Note: DDX = Sum total of DDT, DDD, and DDE concentrations.

FIGURE 21
DDx Groundwater Concentrations
Shallow Zone
August 2009
Arkema, Portland, OR

ERM 11/09

Project Number: 0104584

Date: 01/14/2010

Created By: mike.appel

File: F:\RM106\E\ERM West\Arkema\0104584 GW Monitoring Aug 2009\1209Figures\DDxIntermed.mxd

LEGEND

DDx Concentration (µg/l)

- < 0.2 (DEQ Screening Criteria = 0.2 µg/l)
- 0.2 - 1
- 1 - 10
- 10 - 100
- 100 - 1,000
- > 1,000
- Not detected

Scale 1:2,400

200 100 0 200 Feet

N

Aerial Photography: July 2005

Note: DDX = Sum total of DDT, DDD, and DDE concentrations.

FIGURE 22
DDx Groundwater Concentrations
Intermediate Zone
August 2009
Arkema, Portland, OR

ERM 11/09

Project Number: 0104584

Date: 01/14/2010

Created By: mike.appel

File: F:\RM106\EIERM West\Arkema\0104584 GW Monitoring Aug 2009\1209Figures\DDxDeep.mxd

LEGEND

DDx Concentration (µg/l)

- < 0.2 (DEQ Screening Criteria = 0.2 µg/l)
- 0.2 - 1
- 1 - 10
- 10 - 100
- 100 - 1,000
- > 1,000
- Not detected

200 100 0 200 Feet

Scale 1:2,400

N

Aerial Photography: July 2005

Note: DDX = Sum total of DDT, DDD, and DDE concentrations.

FIGURE 23
DDx Groundwater Concentrations
Deep Zone
August 2009
Arkema, Portland, OR

ERM 11/09

Project Number: 0104584

Date: 01/14/2010

Created By: mike.appel

File: F:\RM106\EERM West\Arkema\0104584 GW Monitoring Aug 2009\1209Figures\DDxBasalt.mxd

LEGEND

DDx Concentration (µg/l)

- < 0.2 (DEQ Screening Criteria = 0.2 µg/l)
- 0.2 - 1
- 1 - 10
- 10 - 100
- 100 - 1,000
- > 1,000
- Not detected

200 100 0 200 Feet

Scale 1:2,400

N

Aerial Photography: July 2005

Note: DDX = Sum total of DDT, DDD, and DDE concentrations.

FIGURE 24
DDx Groundwater Concentrations
Gravel and Basalt Zones
August 2009
Arkema, Portland, OR

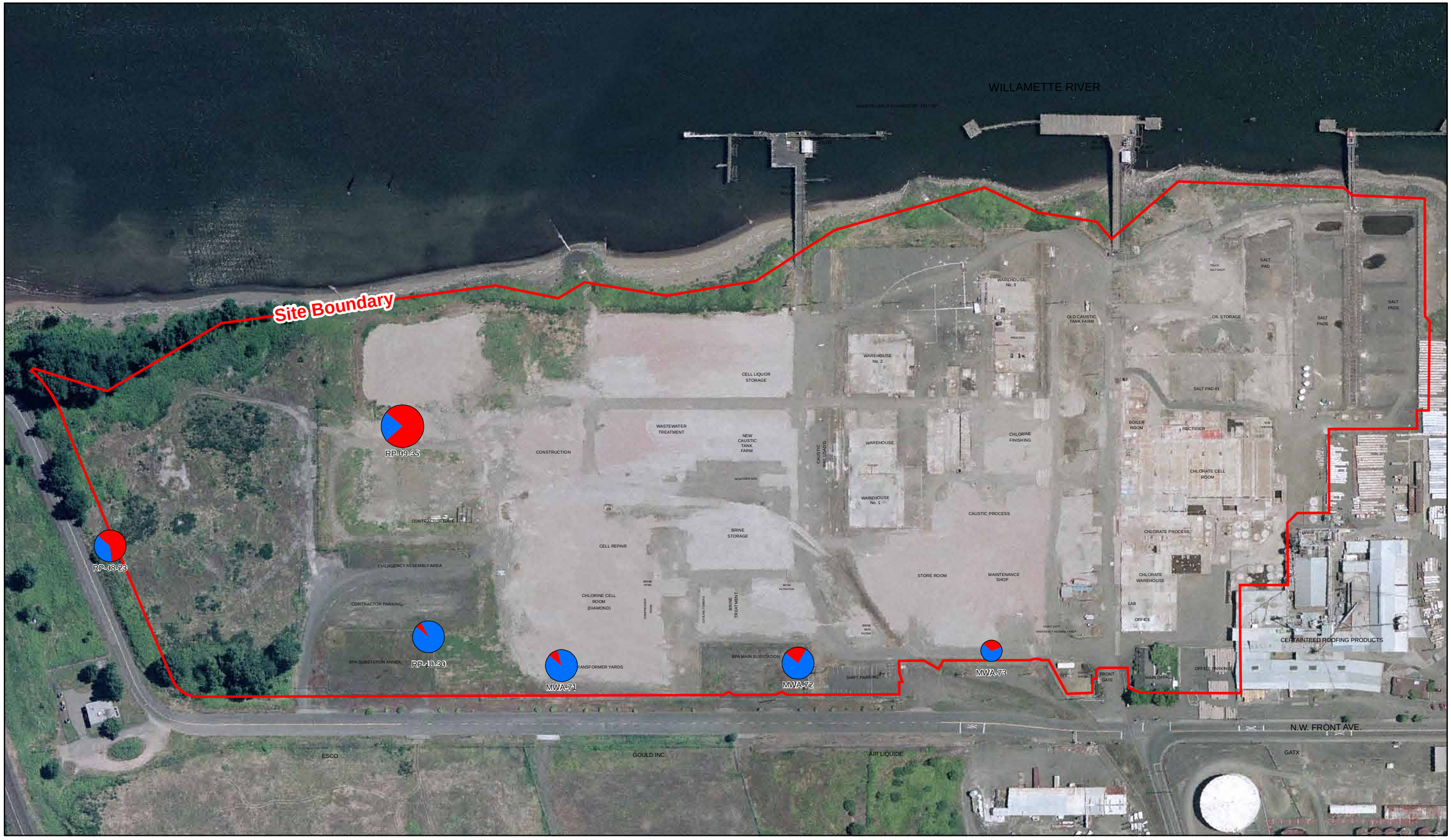
ERM 11/09

Project Number: 0104584

Date: 01/14/2010

Created By: mike.appel

File: F:\RM106\E\ERM West\Arkema\0104584 GW Monitoring Aug 2009\1209Figures\DFShallow.mxd



Legend

Dioxin-Furan TEQ Value (pg/L)

- 0.01 - 0.1
- 0.1 - 1.0
- 1 - 10

Dixion-Furan Mass Ratios

- % of Mass Composed of Furans
- % of Mass Composed of Dioxins

200 100 0 200 Feet

Scale 1:2,400

N

Aerial Photography: July 2005

FIGURE 25
Dioxin-Furan TEQ Groundwater Concentrations
Shallow Zone
August 2009
Arkema, Portland, OR

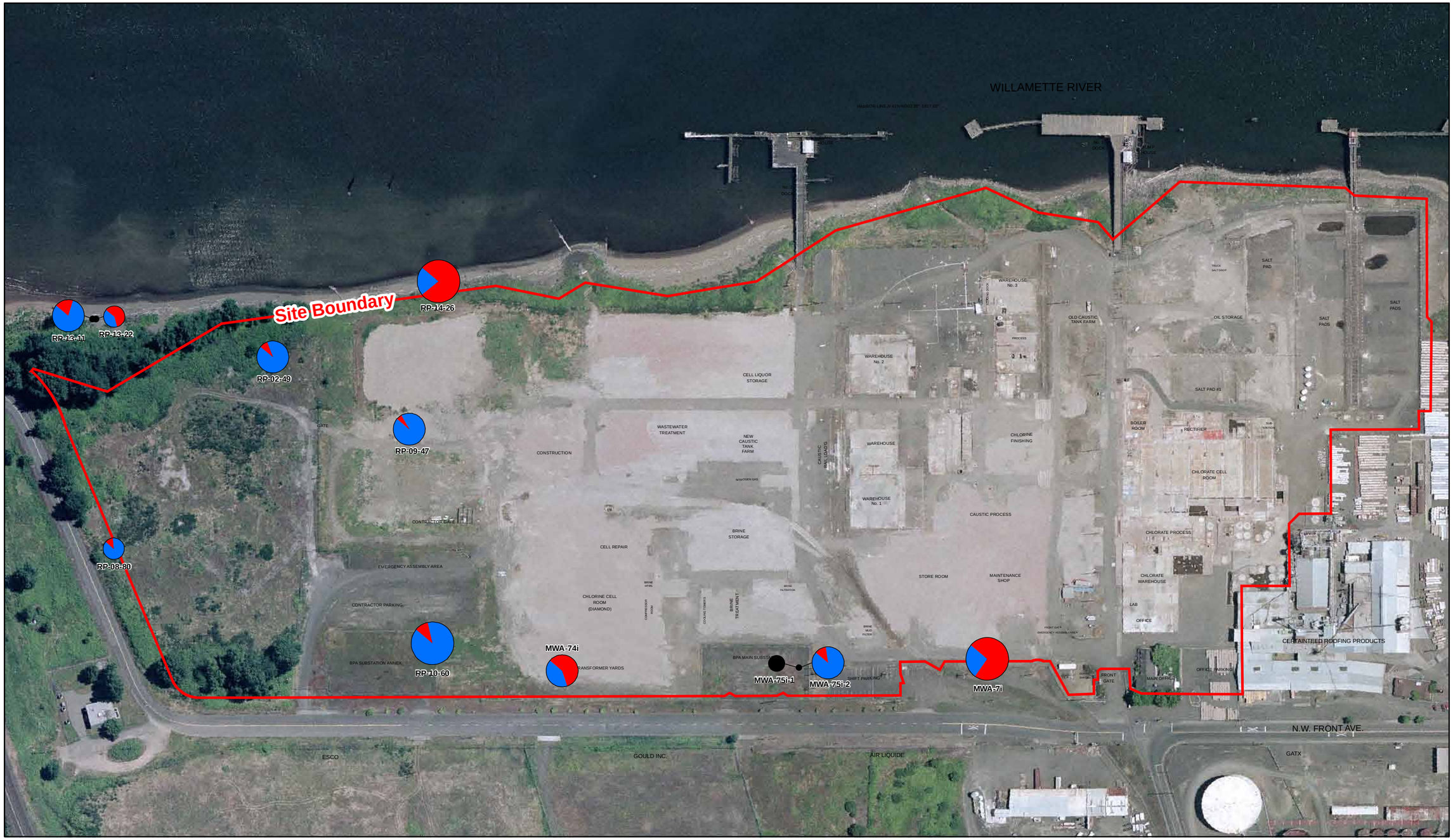
ERM 11/09

Project Number: 0104584

Date: 01/14/2010

Created By: mike.appel

File: F:\RM106\ERM West\Arkema\0104584 GW Monitoring Aug 2009\1209Figures\DFIntermediate.mxd



Legend

Dioxin-Furan TEQ Value (pg/L)

- Not Detected
- 0.01 - 0.1
- 0.1 - 1.0
- 1 - 10

Dixion-Furan Mass Ratios

- % of Mass Composed of Furans
- % of Mass Composed of Dioxins

200 100 0 200 Feet

Scale 1:2,400

N

Aerial Photography: July 2005

FIGURE 26
Dioxin-Furan TEQ Groundwater Concentrations
Intermediate Zone
August 2009
Arkema, Portland, OR

ERM 11/09

Project Number: 0104584

Date: 01/14/2010

Created By: mike.appel

File: F:\RM106\E\ERM West\Arkema\0104584 GW Monitoring Aug 2009\1209Figures\DFDeep.mxd

Legend

Dioxin-Furan TEQ Value (pg/L)

- 0.01 - 0.1
- 0.1 - 1.0
- 1 - 10

Dixion-Furan Mass Ratios

- % of Mass Composed of Furans
- % of Mass Composed of Dioxins

200 100 0 200 Feet

Scale 1:2,400

N

Aerial Photography: July 2005

FIGURE 27
Dioxin-Furan TEQ Groundwater Concentrations
Deep Zone
August 2009
Arkema, Portland, OR

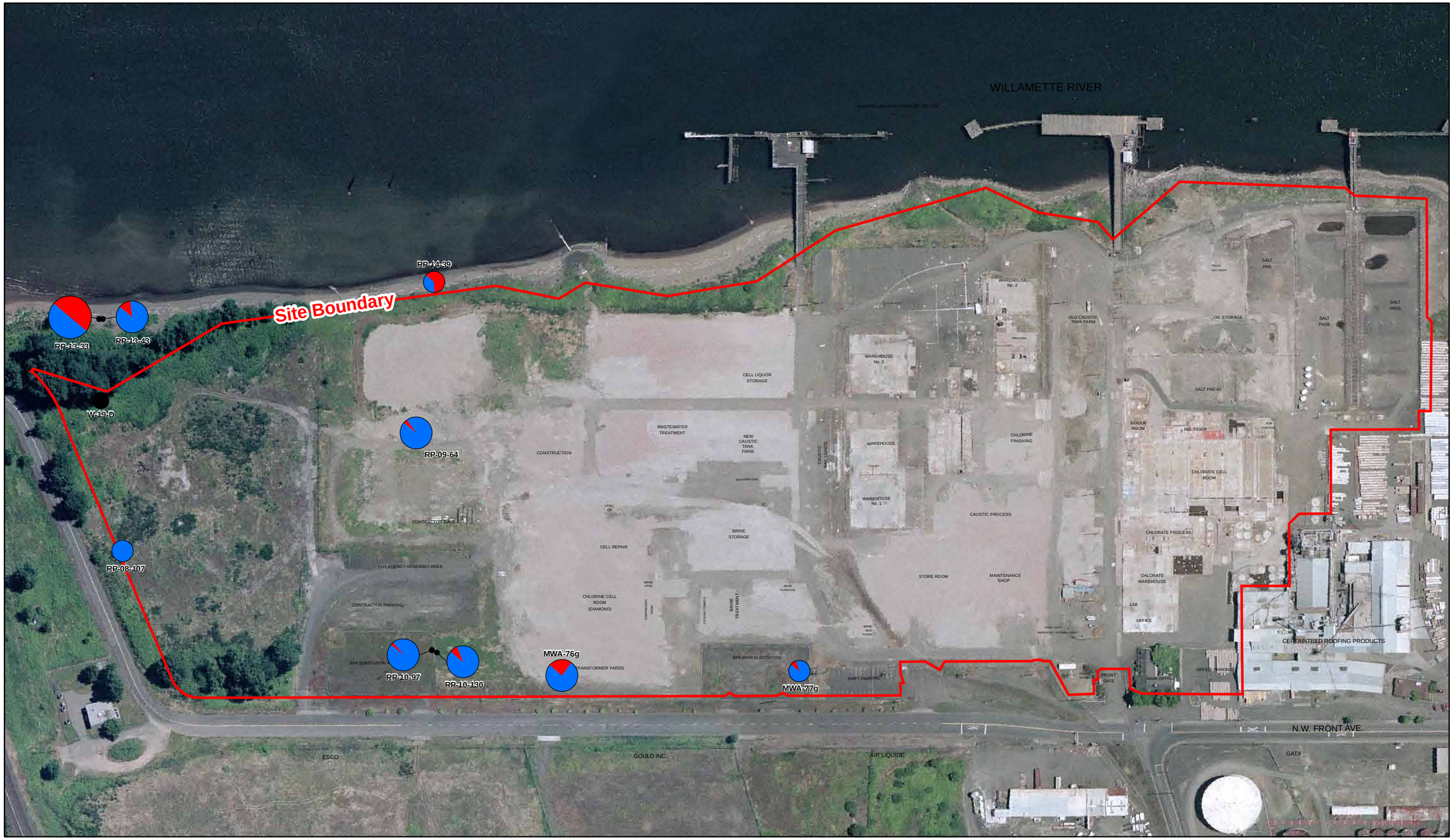
ERM 11/09

Project Number: 0104584

Date: 01/14/2010

Created By: mike.appel

File: F:\RM106\E\ERM West\Arkema\0104584 GW Monitoring Aug 2009\1209Figures\DFBasalt.mxd



Legend

Dioxin-Furan TEQ Value (pg/L)

- Not Detected
- 0.01 - 0.1
- 0.1 - 1.0
- 1 - 10

Dixion-Furan Mass Ratios

- % of Mass Composed of Furans
- % of Mass Composed of Dioxins

200 100 0 200 Feet

Scale 1:2,400

N

Aerial Photography: July 2005

FIGURE 28
Dioxin-Furan TEQ Groundwater Concentrations
Gravel and Basalt Zones
August 2009
Arkema, Portland, OR

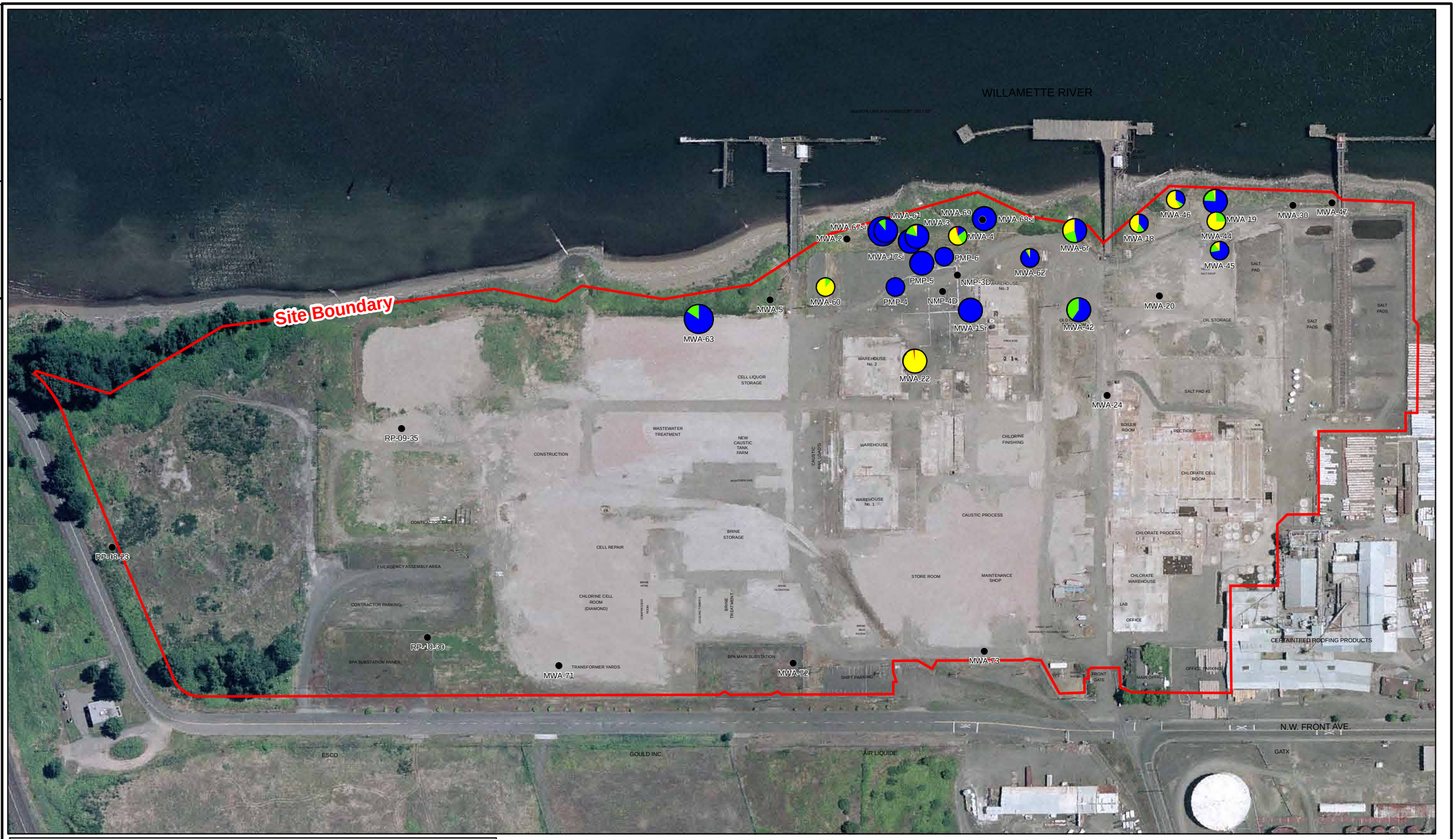
ERM 11/09

Project Number: 0104584

Date: 01/14/2010

Created By: simon.ross

File: F:\RM106\ERM West\Arkema\0104584 GW Monitoring Aug 2009\1209Figures\VOCsShallow.mxd



LEGEND

Total VOC Concentration (µg/l)

- Not Detected
- < 1
- 1 - 10
- 10 - 100
- 100 - 1,000
- > 1,000

Analyte

- Tetrachloroethene (PCE)
- Trichloroethene (TCE)
- cis 1,2-Dichloroethene (cis-1,2-DCE)
- Vinyl Chloride

200 100 0 200 Feet

Scale 1:2,400

Aerial Photography: July 2005

FIGURE 29
PCE, TCE, cis-1,2-DCE and
Vinyl Chloride Groundwater Concentrations
Shallow Zone
August 2009
Arkema, Portland, OR

ERM 11/09

Project Number: 0104584

Date: 01/14/2010

Created By: simon.ross

File: F:\RM106\ERM West\Arkema\0104584 GW Monitoring Aug 2009\1209Figures\VOCs\Intermediate.mxd

LEGEND

Total VOC Concentration (µg/l)

- Not Detected
- < 1
- 1 - 10
- 10 - 100
- 100 - 1,000
- > 1,000

Analyte

- Tetrachloroethene (PCE)
- Trichloroethene (TCE)
- cis 1,2-Dichloroethene (cis-1,2-DCE)
- Vinyl Chloride

200 100 0 200 Feet

Scale 1:2,400

Aerial Photography: July 2005

FIGURE 30
PCE, TCE, cis-1,2-DCE and
Vinyl Chloride Groundwater Concentrations
Intermediate Zone
August 2009
Arkema, Portland, OR

ERM 11/09

Project Number: 0104584

Date: 01/14/2010

Created By: simon.ross

File: F:\RM106\ERM West\Arkema\0104584 GW Monitoring Aug 2009\1209Figures\VOCsDeep.mxd

LEGEND

Total VOC Concentration (µg/l)

- Not Detected
- < 1
- 1 - 10
- 10 - 100
- 100 - 1,000
- > 1,000

Analyte

- Tetrachloroethene (PCE)
- Trichloroethene (TCE)
- cis 1,2-Dichloroethene (cis-1,2-DCE)
- Vinyl Chloride

200 100 0 200 Feet

Scale 1:2,400

N

Aerial Photography: July 2005

FIGURE 31
PCE, TCE, cis-1,2-DCE and
Vinyl Chloride Groundwater Concentrations
Deep Zone
August 2009
Arkema, Portland, OR

ERM 11/09

Project Number: 0104584

Date: 01/14/2010

Created By: simon.ross

File: F:\RM106\ERM West\Arkema\0104584 GW Monitoring Aug 2009\1209Figures\VOCsBasalt.mxd

LEGEND

Total VOC Concentration (µg/l)

- Not Detected
- < 1
- 1 - 10
- 10 - 100
- 100 - 1,000
- > 1,000

Analyte

- Tetrachloroethene (PCE)
- Trichloroethene (TCE)
- cis 1,2-Dichloroethene (cis-1,2-DCE)
- Vinyl Chloride

200 100 0 200 Feet

Scale 1:2,400

N

Aerial Photography: July 2005

FIGURE 32
PCE, TCE, cis-1,2-DCE and
Vinyl Chloride Groundwater Concentrations
Gravel and Basalt Zones
August 2009
Arkema, Portland, OR

ERM 11/09

Project Number: 0104584

Date: 01/14/2010

Created By: mike.appel

File: F:\RM106\EERM West\Arkema\0104584 GW Monitoring Aug 2009\1209Figures\DichlorobenzeneShallow.mxd

LEGEND

1,2-Dichlorobenzene Concentration (µg/l)

- < 0.1
- 0.1 - 1
- 1 - 10
- 10 - 49 (JSCS Screening Criteria = 49 µg/l)
- 49 - 100
- > 100 (DEQ Screening Criteria = 600 µg/l)
- Not detected

200 100 0 200 Feet

Scale 1:2,400

N

Aerial Photography: July 2005

FIGURE 33
1,2-Dichlorobenzene Groundwater Concentrations
Shallow Zone
August 2009
Arkema, Portland, OR

ERM 03/07

Project Number: 0104584

Date: 01/14/2010

Created By: mike.appel

File: F:\RM106\E\ERM West\Arkema\0104584 GW Monitoring Aug 2009\1209Figures\DichlorobenzeneIntermediate.mxd

LEGEND

1,2-Dichlorobenzene Concentration (µg/l)

- < 0.1
- 0.1 - 1
- 1 - 10
- 10 - 49 (JSCS Screening Criteria = 49 µg/l)
- 49 - 100
- > 100 (DEQ Screening Criteria = 600 µg/l)
- Not detected

200 100 0 200 Feet

Scale 1:2,400

N

Aerial Photography: July 2005

FIGURE 34
1,2-Dichlorobenzene Groundwater Concentrations
Intermediate Zone
August 2009
Arkema, Portland, OR

ERM 03/07

Project Number: 0104584

Date: 01/14/2010

Created By: mike.appel

File: F:\RM106\EIERM West\Arkema\0104584 GW Monitoring Aug 2009\1209Figures\DichlorobenzeneDeep.mxd

LEGEND

1,2-Dichlorobenzene Concentration (µg/l)

- < 0.1
- 0.1 - 1
- 1 - 10
- 10 - 49 (JSCS Screening Criteria = 49 µg/l)
- 49 - 100
- > 100 (DEQ Screening Criteria = 600 µg/l)
- Not detected

200 100 0 200 Feet

Scale 1:2,400

N

Aerial Photography: July 2005

FIGURE 35
1,2-Dichlorobenzene Groundwater Concentrations
Deep Zone
August 2009
Arkema, Portland, OR

ERM 03/07

Project Number: 0104584

Date: 01/14/2010

Created By: mike.appel

File: F:\RM106\E\ERM West\Arkema\0104584 GW Monitoring Aug 2009\1209Figures\DichlorobenzeneBasalt.mxd

LEGEND

1,2-Dichlorobenzene Concentration (µg/l)

- < 0.1
- 0.1 - 1
- 1 - 10
- 10 - 49 (JSCS Screening Criteria = 49 µg/l)
- 49 - 100
- > 100 (DEQ Screening Criteria = 600 µg/l)
- Not detected

200 100 0 200 Feet

Scale 1:2,400

Aerial Photography: July 2005

FIGURE 36
1,2-Dichlorobenzene Groundwater Concentrations
Gravel and Basalt Zones
August 2009
Arkema, Portland, OR

ERM 03/07

Project Number: 0104584

Date: 01/14/2010

Created By: mike.appel

File: F:\RM106\E\ERM West\Arkema\0104584 GW Monitoring Aug 2009\1209Figures\SilvexShallow.mxd

LEGEND

Silvex Concentration (µg/l)

- < 1
- 1 - 10
- 10 - 50 (JSCS Screening Criteria = 50 µg/l)
- 50 - 100
- > 100
- Not detected

200 100 0 200 Feet

Scale 1:2,400

N

Aerial Photography: July 2005

FIGURE 37
Silvex Groundwater Concentrations
Shallow Zone
August 2009
Arkema, Portland, OR

ERM 11/09

Project Number: 0104584

Date: 01/14/2010

Created By: mike.appel

File: F:\RM106\E\ERM West\Arkema\0104584 GW Monitoring Aug 2009\1209Figures\SilvexIntermediate.mxd

LEGEND

Silvex Concentration (µg/l)

- < 1
- 1 - 10
- 10 - 50 (JSCS Screening Criteria = 50 µg/l)
- 50 - 100
- > 100
- Not detected

200 100 0 200 Feet

Scale 1:2,400

Aerial Photography: July 2005

FIGURE 38
Silvex Groundwater Concentrations
Intermediate Zone
August 2009
Arkema, Portland, OR

ERM 11/09

Project Number: 0104584

Date: 01/14/2010

Created By: mike.appel

File: F:\RM106\E\ERM West\Arkema\0104584 GW Monitoring Aug 2009\1209Figures\SilvexDeep.mxd

LEGEND

Silvex Concentration (µg/l)

- < 1
- 1 - 10
- 10 - 50 (JSCS Screening Criteria = 50 µg/l)
- 50 - 100
- > 100
- Not detected

200 100 0 200 Feet

Scale 1:2,400

N

Aerial Photography: July 2005

FIGURE 39
Silvex Groundwater Concentrations
Deep Zone
August 2009
Arkema, Portland, OR

ERM 11/09

Project Number: 0104584

Date: 01/14/2010

Created By: mike.appel

File: F:\RM106\E\ERM West\Arkema\0104584 GW Monitoring Aug 2009\1209Figures\SilvexBasalt.mxd

LEGEND

Silvex Concentration (µg/l)

- < 1
- 1 - 10
- 10 - 50 (JSCS Screening Criteria = 50 µg/l)
- 50 - 100
- > 100
- Not detected

200 100 0 200 Feet

Scale 1:2,400

Aerial Photography: July 2005

FIGURE 40
Silvex Groundwater Concentrations
Gravel and Basalt Zones
August 2009
Arkema, Portland, OR

ERM 11/09

Tables

Table 1
Field Parameters Measured in Groundwater
August 2009 Sitewide Groundwater Monitoring
Arkema, Inc. Facility
Portland, Oregon

Well Number	Aquifer	Sample Number	Date	Depth to Groundwater (ft bTOC)*	Groundwater Elevation [a] (ft)	pH	Temp. (deg. C)	EC (mS/cm)	ORP (mV)	DO (mg O_2/L)	Turbidity (NTU)
MWA-2	Shallow	MWA-2-080609	08/06/09	28.31	10.15	4.28	16.0	4.59	200	3.63	15.0
MWA-3	Shallow	MWA-3-081009	08/10/09	28.85	10.59	6.52	16.6	1.47	85	4.18	45.7
MWA-4	Shallow	MWA-4-081109	08/11/09	27.65	10.79	6.58	17.5	2.30	-84	4.23	13.9
MWA-5	Shallow	MWA-5-080509	08/05/09	29.50	9.56	6.90	15.2	1.83	-175	3.72	16.1
MWA-6r	Shallow	MWA-6r-081109	08/11/09	25.15	11.31	7.93	17.2	15.7	28	3.62	6.3
MWA-7(i)	Intermediate	MWA-7(i)-081409	08/13/09	9.02	27.22	6.53	15.9	1.72	-132	3.99	0
MWA-8i	Intermediate	MWA-8i-080609	08/06/09	28.35	9.74	9.71	16.0	9.6	-304	3.46	60.4
MWA-9i	Intermediate	MWA-9i-081109	08/11/09	28.90	9.90	6.25	17.0	13.7	-70	3.95	10.6
MWA-10i	Intermediate	MWA-10i-081109	08/11/09	28.90	8.99	6.50	17.9	7.28	-53	3.67	320
MWA-11i(d)	Deep	MWA-11i-081909	08/18/09	26.04	10.45	7.23	18.8	3.81	-131	3.68	10.0
MWA-12i(d)	Deep	MWA-12i(d)-081409	08/14/09	12.28	23.58	6.59	15.7	1.20	-136	4.03	18.7
MWA-13d	Deep	MWA-13d-081009	08/10/09	29.25	9.82	6.62	17.1	8.45	-60	5.46	250
MWA-14i(d)	Deep	MWA-14i(d)-080509	08/05/09	29.45	9.96	6.77	15.2	8.99	-113	3.60	27.3
MWA-15r	Shallow	MWA-15r-081909	08/18/09	24.80	11.26	6.89	17.9	1.9	-72	3.68	22.5
MWA-16i	Intermediate	MWA-16i-081109	08/11/09	27.71	9.01	6.79	17.5	12.4	-111	3.42	165
MWA-17si	Shallow	MWA-17si-081009	08/10/09	28.65	10.50	5.78	16.6	4.56	142	5.63	72.8
MWA-18	Shallow	MWA-18-081009	08/10/09	28.65	10.78	6.31	19.2	1.68	-53	4.19	60.1
MWA-19	Shallow	MWA-19-081009	08/10/09	29.35	10.55	7.07	20.7	2.74	3	3.63	510
MWA-20	Shallow	MWA-20-081709	08/17/09	29.45	11.50	8.78	19.3	2.81	41	3.93	48.7
MWA-21b	Basalt	--	--	--	--	--	--	--	--	--	--
MWA-22	Shallow	MWA-22-081909	08/19/09	22.20	14.39	11.54	18.8	19.9	-436	3.32	115.0
MWA-23	Shallow	MWA-23-080509	08/05/09	10.25	26.56	6.75	16.4	0.459	-147	3.68	131
MWA-24	Shallow	MWA-24-080509	08/05/09	23.40	14.18	11.23	17.8	6.69	-515	3.21	32.1
MWA-25	Shallow	MWA-25-081909	08/18/09	25.35	12.32	8.67	20.1	3.19	-39	3.34	0.0
MWA-26	Shallow	MWA-26-080509	08/05/09	25.25	12.43	7.30	16.7	0.790	-46	3.63	98.1
MWA-27	Shallow	MWA-27-080509	08/05/09	25.40	11.46	6.63	16.5	1.56	54	3.63	48.7
MWA-28i(d)	Deep	MWA-28i(d)-081909	08/18/09	25.65	12.19	6.95	19.7	0.700	-156	3.40	--[b]
MWA-29	Shallow	MWA-29-080609	08/06/09	27.25	9.98	6.65	16.8	16.7	-77	3.68	50.7
MWA-30	Shallow	MWA-30-081009	08/10/09	26.70	11.64	7.27	18.6	32.5	-63	3.66	295
MWA-31i(d)	Deep	MWA-31i(d)-081009	08/10/09	31.18	7.18	6.09	19.2	NA[c]	-58	2.25	70.8
MWA-32i	Intermediate	MWA-32i-081009	08/10/09	28.75	9.95	6.73	18.5	13.2	34	3.82	114
MWA-33	Shallow	MWA-33-080509	08/05/09	21.37	15.89	10.71	19.2	4.72	-312	3.45	21.8
MWA-34i	Intermediate	MWA-34i-081109	08/11/09	NM	--	9.34	18.4	5.17	-35	3.5	NA[c]
MWA-35	Shallow	MWA-35-081909	08/18/09	25.30	12.67	8.98	20.4	3.39	-64	3.78	0.0
MWA-36	Shallow	MWA-36-081909	08/19/09	24.90	12.44	9.36	29.1	2.32	-39	2.74	--[b]
MWA-37	Shallow	MWA-37-081909	08/19/09	25.05	12.51	9.71	23.0	4.12	-57	3.24	0.0
MWA-38	Shallow	MWA-38-080509	08/05/09	24.55	13.00	9.29	19.3	1.28	-74	3.36	55.8
MWA-39	Shallow	MWA-39-080509	08/05/09	10.35	26.71	9.64	16.0	1.95	-267	3.66	16.5
MWA-40	Shallow	MWA-40-080509	08/05/09	18.65	18.31	10.25	18.0	3.68	-414	3.55	61.0
MWA-41	Shallow	MWA-41-080609	08/06/09	26.70	11.07	6.16	15.4	0.533	132	4.62	69.1
MWA-42	Shallow	MWA-42-081709	08/17/09	25.50	11.74	9.40	18.9	2.52	-243	3.56	45.1
MWA-43	Shallow	MWA-43-080609	08/06/09	26.94	10.28	6.26	16.9	6.30	79	3.81	31.5
MWA-44	Shallow	MWA-44-081109	08/11/09	26.35	10.99	7.50	17.8	2.80	-20	3.62	7.8
MWA-45	Shallow	MWA-45-081709	08/17/09	27.20	11.02	8.49	19.8	2.44	-55	3.91	295
MWA-46	Shallow	MWA-46-081009	08/10/09	26.30	10.37	7.32	18.8	4.61	-22	3.75	174
MWA-47	Shallow	MWA-47-080609	08/06/09	28.55	10.14	6.79	17.0	8.16	-17	3.40	62.8
MWA-48i	Intermediate	MWA-48i-081909	08/18/09	27.40	10.07	6.41	19.8	24.2	38	4.55	--[b]
MWA-49i	Intermediate	MWA-49i-081009	08/10/09	26.50	10.18	5.57	20.0	29.1	150	4.05	251
MWA-50i	Intermediate	MWA-50i-080609	08/06/09	29.10	9.70	6.10	18.0	18.6	106	3.30	12
MWA-51i	Intermediate	MWA-51i-081009	08/10/09	24.85	11.48	6.70	18.4	16.2	-73	3.65	23.8
MWA-52i	Intermediate	MWA-52i-081709	08/17/09	25.15	10.50	6.42	20.2	5.12	80	3.61	101
MWA-53i	Intermediate	MWA-53i-080609	08/06/09	27.65	9.62	6.20	17.2	22.2	-116	3.44	56.8
MWA-54i	Intermediate	MWA-54i-081909	08/18/09	27.15	10.16	7.22	18.0	14.7	-209	3.57	0.0
MWA-55i	Intermediate	MWA-55i-081709	08/17/09	27.45	10.67	6.17	19.1	16.7	115	4.09	395
MWA-56d	Deep	MWA-56d-081009	08/10/09	26.45	10.23	6.28	19.3	52.6	95	3.15	40.7
MWA-57d	Deep	MWA-57d-081709	08/17/09	27.05	11.06	6.55	20.5	44.4	121	3.47	369
MWA-58d	Deep	MWA-58d-081009	08/10/09	27.72	9.35	6.28	19.2	80.8	123	2.80	80.4
MWA-59d	Deep	MWA-59d-080609	08/06/09	28.80	10.07	6.26	19.1	NA[c]	105	2.25	2.8
MWA-60	Shallow	MWA-60-080509	08/05/09	25.25	10.34	6.78	15.7	3.87	-67	3.64	48.7
MWA-61	Shallow	MWA-61-081009	08/10/09	25.45	10.76	5.84	16.3	3.76	170	4.17	74.3
MWA-62	Shallow	MWA-62-081709	08/17/09	24.30	11.98	5.02	20.4	0.319	164	3.78	38.7
MWA-63	Shallow	MWA-63-080509	08/05/09	26.60	9.69	6.29	15.0	2.75	92	6.06	14.8
MWA-64i	Intermediate	MWA-64i-080609	08/06/09	26.30	9.54	9.72	16.6	11.2	-341	3.40	28.3
MWA-65i	Intermediate	MWA-65i-081709	08/17/09	25.05	10.40	6.16	19.2	7.47	41	3.92	7.44
MWA-66i	Intermediate	MWA-66i-081109	08/11/09	23.47	9.63	5.92	18.1	6.43	103	4.25	20.4
MWA-67si	Shallow	MWA-67si-080609	08/06/09	26.22	10.12	3.76	16.6	16.7	278	3.47	26.5
MWA-68si	Shallow	MWA-68si-081109	08/11/09	33.15	0.62	3.40	17.4	4.82	299	4.10	60.4
MWA-69	Shallow	MWA-69-081109	08/11/09	22.95	10.74	5.76	16.1	4.02	-59	3.94	425
MWA-70i	Intermediate	MWA-70i-080509	08/05/09	22.20	15.42	6.06	17.2	17.6	-96	3.89	425
MWA-71	Shallow	MWA-71-080709	08/07/09	6.30	28.52	6.69	14.5	0.855	-181	3.53	2.5
MWA-72	Shallow	MWA-72-081709	08/17/09	6.30	27.86	6.62	16.2	0.643	-152	3.85	25.0
MWA-73	Shallow	MWA-73-081409	08/14/09	8.25	27.76	6.65	16.6	0.361	-98	3.94	30.5
MWA-74i	Intermediate	MWA-74i-080709	08/07/09	9.50	25.22	6.38	14.7	2.43	-126	3.92	61.6
MWA-75i-1	Intermediate	MWA-75i-1-081409	08/14/09	5.70	28.39	6.63	19.7	1.06	-137	3.77	3.4
MWA-75i-2	Intermediate	MWA-75i-2-081409	08/13/09	5.70	28.39	6.64	17.8	1.06	-139	3.83	11.6
MWA-76g	Gravel	MWA-76g-080709	08/07/09	19.71	15.25	6.97	14.8	0.662	-151	3.90	3.0
MWA-77g	Gravel	MWA-77g-081709	08/17/09	11.52	22.51	6.86	18.5	436	-130	3.89	39.4

Table 1
Field Parameters Measured in Groundwater
August 2009 Sitewide Groundwater Monitoring
Arkema, Inc. Facility
Portland, Oregon

Well Number	Aquifer	Sample Number	Date	Depth to Groundwater (ft bTOC)*	Groundwater Elevation [a] (ft)	pH	Temp. (deg. C)	EC (mS/cm)	ORP (mV)	DO (mg O_2/L)	Turbidity (NTU)
NMP-3D	Shallow	NMP-3D-081909	08/19/09	24.65	11.11	3.61	18.4	13.4	294	3.40	166.0
NMP-4D	Shallow	NMP-4D-081909	08/19/09	25.15	10.48	6.15	18.4	12.4	-3	3.39	12.2
PMP-4	Shallow	PMP-4-081109	08/11/09	25.10	10.80	4.47	17.5	0.730	258	4.08	138
PMP-5	Shallow	PMP-5-081109	08/11/09	25.30	10.74	4.06	17.0	5.25	276	4.03	1.5
PMP-6	Shallow	PMP-6-081109	08/11/09	25.10	10.73	4.52	17.5	2.80	242	3.80	246
RP-02-31	Shallow	Dry	08/13/09	Dry	--	--	--	--	--	--	--
RP-02-49	Intermediate	RP-02-49-081309	08/13/09	31.70	7.58	6.22	15.3	25.3	28	3.42	--[b]
RP-02-66	Basalt	RP-02-66-081309	08/13/09	31.55	7.60	6.16	16.4	27.7	4	3.26	--[b]
RP-08-23	Shallow	RP-08-23-081309	08/13/09	14.50	24.33	7.09	16.2	1.47	-178	3.89	10.5
RP-08-80	Intermediate	RP-08-80-081309	08/13/09	25.65	12.92	6.30	15.1	7.89	-2	3.75	5.3
RP-08-107	Basalt	RP-08-107-081309	08/13/09	25.35	13.21	6.48	14.1	3.54	-69	3.89	4.4
RP-09-35	Shallow	RP-09-35-081209	08/10/09	26.90	11.69	7.94	18.4	4.65	-201	3.59	14.6
RP-09-47	Intermediate	RP-09-47-081209	08/12/09	27.10	11.65	7.06	16.4	2.38	-29	3.70	3.1
RP-09-64	Basalt	RP-09-64-081209	08/12/09	26.80	11.67	6.63	17.7	5.08	-69	3.45	10.1
RP-10-30	Shallow	RP-10-30-081209	08/12/09	10.90	26.57	9.87	17.2	0.302	-251	3.67	--[b]
RP-10-60	Intermediate	RP-10-60-081209	08/12/09	23.20	14.14	6.82	16.3	1.40	-94	3.72	--[b]
RP-10-97	Gravel	RP-10-97-081209	08/12/09	22.70	13.95	6.58	16.0	0.774	-79	3.74	--[b]
RP-10-130	Basalt	RP-10-130-081209	08/12/09	23.00	14.00	7.04	16.4	1.02	-77	3.65	--[b]
RP-13-11	Intermediate	RP-13-11-081809	08/18/09	11.45	7.15	6.45	17.8	1.10	-110	4.13	231
RP-13-22	Intermediate	RP-13-22-081809	08/18/09	11.45	6.98	6.37	18.3	1.07	12	3.61	3.8
RP-13-33	Gravel	RP-13-33-081809	08/18/09	12.20	6.46	6.49	17	2.63	17	3.87	0.0
RP-13-43	Basalt	RP-13-43-081809	08/18/09	11.70	6.65	6.40	16.0	6.92	19	3.82	15.9
RP-14-11	Intermediate	Dry	08/18/09	10.55	6.31	--	--	--	--	--	--
RP-14-26	Intermediate	RP-14-26-081809	08/18/09	11.05	5.93	9.37	18.9	3.46	4	3.45	--[c]
RP-14-39	Gravel	RP-14-39-081809	08/18/09	10.90	5.94	8.39	19.4	10.1	28	3.55	0.0
W-19-D	Basalt	W-19-D-081409	08/14/09	26.00	11.08	6.52	14.4	10.9	16	4.00	0.0
W-19-I	Deep	W-19-I-081409	08/14/09	26.68	10.63	7.36	15.6	2.33	-25	5.47	7.0
W-19-S	Shallow	Dry	08/14/09	Dry	--	--	--	--	--	--	--

Notes and Key

Diffusion bag samples were collected from MWA-15r and MWA-69 on 3 September 2009 and identified as MWA-15r-090309 and MWA-69-090309, respectively.
* = Dept to groundwater measurements taken on 08/03/09
-- = Not measured
a = Elevation datum is NAVD 88.
b = Turbidity meter was identfied as malfunctioning in the field.
c = Value was greater than the maximum detection limit for the probe.
bTOC = Below Top of casing
deg. C = Degrees Celcius
DO = Dissolved Oxygen
EC = Electrical Conductivity
ft = feet
mg O_2/L = millgrams of oxygen per liter
mS/cm = millisiemens per centimeter
mV = millivolts
NTU = Nephelometric turbidity units
ORP = Oxidation Reduction Potential

Table 2
Volatile Organic Compounds Results
August 2009 Sitewide Groundwater Monitoring
Arkema, Inc. Facility
Portland, Oregon

Wells	Aquifer	Sample ID	Sample Date	1,1,1,2-Tetrachloroethane ug/l	1,1,1-Trichloroethane ug/l	1,1,2,2-Tetrachloroethane ug/l	1,1,2-Trichloroethane ug/l	1,1-Dichloroethane ug/l	1,1-Dichloroethene ug/l	1,1-Dichloropropene ug/l
MWA-2	Shallow	MWA-2-080609	08/06/2009	< 45.0 U	< 60.0 U	< 40.0 U	< 65.0 U	< 40.0 U	< 60.0 U	< 40.0 U
MWA-3	Shallow	MWA-3-081009	08/10/2009	< 0.0900 UJ	< 0.120 UJ	< 0.0800 UJ	**0.14** J	**0.5** J	< 0.120 UJ	< 0.0800 UJ
MWA-4	Shallow	MWA-4-081109	08/11/2009	< 0.180 U	< 0.240 U	< 0.160 U	< 0.260 U	**0.34** J	< 0.240 U	< 0.160 U
MWA-5	Shallow	MWA-5-080509	08/05/2009	< 0.180 U	< 0.240 U	< 0.160 U	< 0.260 U	**1.64**	< 0.240 U	< 0.160 U
MWA-6R	Shallow	MWA-6R-081109	08/11/2009	< 1.80 U	< 2.40 U	< 1.60 U	< 2.60 U	< 1.60 U	< 2.40 U	< 1.60 U
MWA-7(I)	Intermediate	MWA-7(I)-081409	08/14/2009	< 0.450 U	< 0.600 U	< 0.400 U	< 0.650 U	< 0.400 U	< 0.600 U	< 0.400 U
MWA-8I	Intermediate	MWA-8I-080609	08/06/2009	< 1.80 U	< 2.40 U	< 1.60 U	< 2.60 U	< 1.60 U	< 2.40 U	< 1.60 U
MWA-9I	Intermediate	MWA-9I-081109	08/11/2009	< 90.0 U	< 120 U	< 80.0 U	< 130 U	< 80.0 U	< 120 U	< 80.0 U
MWA-10I	Intermediate	MWA-10I-081109	08/11/2009	< 9.00 U	< 12.0 U	< 8.00 U	< 13.0 U	< 8.00 U	< 12.0 U	< 8.00 U
MWA-11I(D)	Deep	MWA-11I-081909	08/19/2009	< 0.0900 U	< 0.120 U	< 0.0800 UJ	< 0.130 U	< 0.0800 U	< 0.120 U	< 0.0800 U
MWA-12I(D)	Deep	MWA-12I(D)-081409	08/14/2009	< 0.0900 U	< 0.120 U	< 0.0800 U	< 0.130 U	< 0.0800 U	< 0.120 U	< 0.0800 U
MWA-13D	Deep	MWA-13D-081009	08/10/2009	< 0.900 UJ	< 1.20 UJ	< 0.800 UJ	< 1.30 UJ	< 0.800 UJ	< 1.20 UJ	< 0.800 UJ
MWA-14I(D)	Deep	MWA-14I(D)-080509	08/05/2009	< 0.180 U	< 0.240 U	< 0.160 U	< 0.260 U	**0.64** J	< 0.240 U	< 0.160 U
MWA-15R	Shallow	MWA-15R-081909	08/19/2009	< 18.0 U	< 24.0 U	< 16.0 UJ	< 26.0 U	< 16.0 U	< 24.0 U	< 16.0 U
MWA-16I	Intermediate	MWA-16I-081109	08/11/2009	< 0.180 U	< 0.240 U	< 0.160 U	< 0.260 U	**0.76** J	< 0.240 U	< 0.160 U
MWA-17SI	Shallow	MWA-17SI-081009	08/10/2009	< 9.00 UJ	< 12.0 UJ	< 8.00 UJ	< 13.0 UJ	< 8.00 UJ	< 12.0 UJ	< 8.00 UJ
MWA-18	Shallow	MWA-18-081009	08/10/2009	< 0.0900 UJ	< 0.120 UJ	< 0.0800 UJ	< 0.130 UJ	< 0.0800 UJ	< 0.120 UJ	< 0.0800 UJ
MWA-19	Shallow	MWA-19-081009	08/10/2009	< 0.0900 U	< 0.120 U	< 0.0800 U	< 0.130 U	**0.64**	< 0.120 U	< 0.0800 U
MWA-20	Shallow	MWA-20-081709	08/17/2009	< 1.80 U	< 2.40 U	< 1.60 U	< 2.60 U	< 1.60 U	< 2.40 U	< 1.60 U
MWA-22	Shallow	MWA-22-081909	08/19/2009	< 0.450 U	< 0.600 U	< 0.400 UJ	< 0.650 U	**1.35**	< 0.600 U	< 0.400 U
MWA-24	Shallow	MWA-24-080509	08/05/2009	< 0.0900 U	< 0.120 U	< 0.0800 U	< 0.130 U	< 0.0800 U	< 0.120 U	< 0.0800 U
MWA-30	Shallow	MWA-30-081009	08/10/2009	< 0.360 UJ	< 0.480 UJ	< 0.320 UJ	< 0.520 UJ	< 0.320 UJ	< 0.480 UJ	< 0.320 UJ
MWA-31I(D)	Deep	MWA-31I(D)-081009	08/10/2009	< 1 UJT	< 1 UJT	< 1 UJT	< 1 UJT	< 1 UJT	< 1 UJT	< 1 UJT
MWA-32I	Intermediate	MWA-32I-081009	08/10/2009	< 0.180 UJ	< 0.240 UJ	< 0.160 UJ	< 0.260 UJ	**0.52** J	< 0.240 UJ	< 0.160 UJ
MWA-34I	Intermediate	MWA-34I-081109	08/11/2009	< 25 UT	< 25 UT	< 25 UT	< 25 UT	< 25 UT	< 25 UT	< 25 UT
MWA-42	Shallow	MWA-42-081709	08/17/2009	< 0.450 U	< 0.600 U	< 0.400 U	< 0.650 U	< 0.400 U	< 0.600 U	< 0.400 U
MWA-44	Shallow	MWA-44-081109	08/11/2009	< 0.180 U	< 0.240 U	< 0.160 U	< 0.260 U	**0.32** J	< 0.240 U	< 0.160 U
MWA-45	Shallow	MWA-45-081709	08/17/2009	< 0.0900 U	< 0.120 U	< 0.0800 U	< 0.130 U	**0.49** J	< 0.120 U	< 0.0800 U
MWA-46	Shallow	MWA-46-081009	08/10/2009	< 0.180 U	< 0.240 U	< 0.160 U	< 0.260 U	**1.84**	< 0.240 U	< 0.160 U
MWA-47	Shallow	MWA-47-080609	08/06/2009	< 0.180 U	< 0.240 U	< 0.160 U	< 0.260 U	< 0.160 U	< 0.240 U	< 0.160 U
MWA-49I	Intermediate	MWA-49I-081009	08/10/2009	< 1.80 U	< 2.40 U	< 1.60 U	< 2.60 U	< 1.60 U	< 2.40 U	< 1.60 U
MWA-50I	Intermediate	MWA-50I-080609	08/06/2009	< 0.180 U	< 0.240 U	< 0.160 U	< 0.260 U	< 0.160 U	< 0.240 U	< 0.160 U
MWA-51I	Intermediate	MWA-51I-081009	08/10/2009	< 0.450 UJ	< 0.600 UJ	< 0.400 UJ	< 0.650 UJ	**1.25** J	< 0.600 UJ	< 0.400 UJ
MWA-54I	Intermediate	MWA-54I-081909	08/19/2009	< 0.450 U	< 0.600 U	< 0.400 UJ	< 0.650 U	**0.6** J	< 0.600 U	< 0.400 U
MWA-55I	Intermediate	MWA-55I-081709	08/17/2009	< 0.450 U	< 0.600 U	< 0.400 U	< 0.650 U	**1.2** J	< 0.600 U	< 0.400 U
MWA-56D	Deep	MWA-56D-081009	08/10/2009	< 0.900 U	< 1.20 U	< 0.800 U	< 1.30 U	< 0.800 U	< 1.20 U	< 0.800 U
MWA-57D	Deep	MWA-57D-081709	08/17/2009	< 0.450 U	< 0.600 U	< 0.400 U	< 0.650 U	< 0.400 U	< 0.600 U	< 0.400 U
MWA-58D	Deep	MWA-58D-081009	08/10/2009	< 1.80 U	< 2.40 U	< 1.60 U	< 2.60 U	< 1.60 U	< 2.40 U	< 1.60 U
MWA-59D	Deep	MWA-59D-080609	08/06/2009	< 0.0900 U	< 0.120 U	< 0.0800 U	< 0.130 U	**0.14** J	< 0.120 U	< 0.0800 U
MWA-60	Shallow	MWA-60-080509	08/05/2009	< 0.450 U	< 0.600 U	< 0.400 U	< 0.650 U	**1.55** J	< 0.600 U	< 0.400 U
MWA-61	Shallow	MWA-61-081009	08/10/2009	< 1.80 UJ	**2.4** J	< 1.60 UJ	< 2.60 UJ	< 1.60 UJ	< 2.40 UJ	< 1.60 UJ
MWA-62	Shallow	MWA-62-081709	08/17/2009	< 0.0900 U	**0.33** J	< 0.0800 U	< 0.130 U	< 0.0800 U	< 0.120 U	< 0.0800 U
MWA-63	Shallow	MWA-63-080509	08/05/2009	< 18.0 U	< 24.0 U	< 16.0 U	< 26.0 U	< 16.0 U	< 24.0 U	< 16.0 U
MWA-64I	Intermediate	MWA-64I-080609	08/06/2009	< 4.50 U	< 6.00 U	< 4.00 U	< 6.50 U	< 4.00 U	< 6.00 U	< 4.00 U
MWA-65I	Intermediate	MWA-65I-081709	08/17/2009	< 4.50 U	< 6.00 U	< 4.00 U	< 6.50 U	< 4.00 U	< 6.00 U	< 4.00 U
MWA-66I	Intermediate	MWA-66I-081109	08/11/2009	< 9.00 U	< 12.0 U	< 8.00 U	< 13.0 U	< 8.00 U	< 12.0 U	< 8.00 U
MWA-67SI	Shallow	MWA-67SI-080609	08/06/2009	< 90.0 U	< 120 U	< 80.0 U	< 130 U	< 80.0 U	< 120 U	< 80.0 U
MWA-68SI	Shallow	MWA-68SI-081109	08/11/2009	< 9.00 U	< 12.0 U	< 8.00 U	< 13.0 U	< 8.00 U	< 12.0 U	< 8.00 U
MWA-69	Shallow	MWA-69-081109	08/11/2009	< 9.00 U	< 12.0 U	< 8.00 U	< 13.0 U	< 8.00 U	< 12.0 U	< 8.00 U
MWA-71	Shallow	MWA-71-080709	08/07/2009	< 0.180 U	< 0.240 U	< 0.160 U	< 0.260 U	< 0.160 U	< 0.240 U	< 0.160 U
MWA-72	Shallow	MWA-72-081709	08/17/2009	< 0.0900 U	< 0.120 U	< 0.0800 U	< 0.130 U	< 0.0800 U	< 0.120 U	< 0.0800 U
MWA-73	Shallow	MWA-73-081409	08/14/2009	< 0.0900 U	< 0.120 U	< 0.0800 U	< 0.130 U	< 0.0800 U	< 0.120 U	< 0.0800 U
MWA-74I	Intermediate	MWA-74I-080709	08/07/2009	< 0.0900 U	< 0.120 U	< 0.0800 U	< 0.130 U	< 0.0800 U	< 0.120 U	< 0.0800 U
MWA-75I	Intermediate	MWA-75I-1-081409	08/14/2009	< 0.0900 U	< 0.120 U	< 0.0800 U	< 0.130 U	**0.68**	< 0.120 U	< 0.0800 U
MWA-75I	Intermediate	MWA-75I-2-081409	08/14/2009	< 0.0900 U	< 0.120 U	< 0.0800 U	< 0.130 U	**0.66**	**0.43** J	< 0.0800 U
MWA-76G	Gravel	MWA-76G-080709	08/07/2009	< 0.0900 U	< 0.120 U	< 0.0800 U	< 0.130 U	< 0.0800 U	< 0.120 U	< 0.0800 U
MWA-77G	Gravel	MWA-77G-081709	08/17/2009	< 0.0900 U	< 0.120 U	< 0.0800 U	< 0.130 U	< 0.0800 U	< 0.120 U	< 0.0800 U
NMP-3D	Shallow	NMP-3D-081909	08/19/2009	< 25 UT	< 25 UT	< 25 UJT	< 25 UT	< 25 UT	< 25 UT	< 25 UT
NMP-4D	Shallow	NMP-4D-081909	08/19/2009	< 90.0 U	< 120 U	< 80.0 UJ	< 130 U	< 80.0 U	< 120 U	< 80.0 U
PMP-4	Shallow	PMP-4-081109	08/11/2009	< 1.80 U	**4.8** J	< 1.60 U	< 2.60 U	< 1.60 U	< 2.40 U	< 1.60 U
PMP-6	Shallow	PMP-6-081109	08/11/2009	< 1.80 U	< 2.40 U	< 1.60 U	< 2.60 U	< 1.60 U	< 2.40 U	< 1.60 U
PMP-5	Shallow	PMP-5-081109	08/11/2009	< 1.80 U	< 2.40 U	< 1.60 U	< 2.60 U	< 1.60 U	< 2.40 U	< 1.60 U
RP-02-49	Intermediate	RP-02-49-081309	08/13/2009	< 0.450 U	< 0.600 U	< 0.400 U	< 0.650 U	< 0.400 U	< 0.600 U	< 0.400 U
RP-02-66	Basalt	RP-02-66-081309	08/13/2009	< 0.450 U	< 0.600 U	< 0.400 U	< 0.650 U	< 0.400 U	< 0.600 U	< 0.400 U
RP-08-23	Shallow	RP-08-23-081309	08/13/2009	< 0.180 U	< 0.240 U	< 0.160 U	< 0.260 U	< 0.160 U	< 0.240 U	< 0.160 U
RP-08-80	Intermediate	RP-08-80-081309	08/13/2009	< 1.80 U	< 2.40 U	< 1.60 U	< 2.60 U	< 1.60 U	< 2.40 UJ	< 1.60 U
RP-08-107	Basalt	RP-08-107-081309	08/13/2009	< 1.80 U	< 2.40 U	< 1.60 U	< 2.60 U	< 1.60 U	< 2.40 UJ	< 1.60 U
RP-09-35	Shallow	RP-09-35-081209	08/12/2009	< 0.180 U	< 0.240 U	< 0.160 U	< 0.260 U	< 0.160 U	< 0.240 U	< 0.160 U
RP-09-47	Intermediate	RP-09-47-081209	08/12/2009	< 0.0900 U	< 0.120 U	< 0.0800 U	< 0.130 U	< 0.0800 U	< 0.120 U	< 0.0800 U
RP-09-64	Basalt	RP-09-64-081209	08/12/2009	< 0.0900 U	< 0.120 U	< 0.0800 U	< 0.130 U	< 0.0800 U	< 0.120 U	< 0.0800 U
RP-10-30	Shallow	RP-10-30-081209	08/12/2009	< 0.0900 UJ	< 0.120 UJ	< 0.0800 UJ	< 0.130 UJ	< 0.0800 UJ	< 0.120 UJ	< 0.0800 UJ
RP-10-60	Intermediate	RP-10-60-081209	08/12/2009	< 0.0900 UJ	< 0.120 UJ	< 0.0800 UJ	< 0.130 UJ	< 0.0800 UJ	< 0.120 UJ	< 0.0800 UJ
RP-10-97	Gravel	RP-10-97-081209	08/12/2009	< 0.0900 UJ	< 0.120 UJ	< 0.0800 UJ	< 0.130 UJ	< 0.0800 UJ	< 0.120 UJ	< 0.0800 UJ
RP-10-130	Basalt	RP-10-130-081209	08/12/2009	< 0.0900 UJ	< 0.120 UJ	< 0.0800 UJ	< 0.130 UJ	< 0.0800 UJ	< 0.120 UJ	< 0.0800 UJ
RP-13-11	Intermediate	RP-13-11-081809	08/18/2009	< 0.0900 U	< 0.120 U	< 0.0800 U	< 0.130 U	< 0.0800 U	< 0.120 U	< 0.0800 U
RP-13-22	Intermediate	RP-13-22-081809	08/18/2009	< 0.0900 U	< 0.120 U	< 0.0800 U	< 0.130 U	< 0.0800 U	< 0.120 U	< 0.0800 U
RP-13-33	Gravel	RP-13-33-081809	08/18/2009	< 0.450 U	< 0.600 U	< 0.400 UJ	< 0.650 U	< 0.400 U	< 0.600 U	< 0.400 U
RP-13-43	Basalt	RP-13-43-081809	08/18/2009	< 0.900 U	< 1.20 U	< 0.800 UJ	< 1.30 U	< 0.800 U	< 1.20 U	< 0.800 U
RP-14-26	Intermediate	RP-14-26-081809	08/18/2009	< 1 UT	< 1 UT	< 1 UJT	< 1 UT	< 1 UT	< 1 UT	< 1 UT
RP-14-39	Gravel	RP-14-39-081809	08/18/2009	< 0.180 U	< 0.240 U	< 0.160 UJ	< 0.260 U	< 0.160 U	< 0.240 U	< 0.160 U
W-19-D	Basalt	W-19-D-081409	08/14/2009	< 5 UT	< 5 UT	< 5 UT	< 5 UT	< 5 UT	**2.95** JT	< 5 UT
W-19-I	Deep	W-19-I-081409	08/14/2009	< 0.0900 U	< 0.120 U	< 0.0800 U	< 0.130 U	< 0.0800 U	< 0.120 U	< 0.0800 U

Wells	1,2,3-Trichlorobenzene ug/l	1,2,3-Trichloropropane ug/l	1,2,4-Trichlorobenzene ug/l	1,2,4-Trimethylbenzene ug/l	1,2-Dibromo-3-chloropropane ug/l	1,2-Dichloropropane ug/l	1,3,5-Trimethylbenzene ug/l	1,3-Dichlorobenzene ug/l	1,3-Dichloropropane ug/l	2,2-Dichloropropane ug/l	2-Butanone ug/l
MWA-2	< 50.0 U	< 65.0 U	< 55.0 U	< 40.0 U	< 1180 U	< 55.0 U	< 35.0 U	< 30.0 U	< 70.0 U	< 45.0 U	< 1750 UJ
MWA-3	< 0.100 UJ	< 0.130 UJ	< 0.110 UJ	< 0.0800 UJ	< 2.35 UJ	< 0.110 UJ	< 0.0700 UJ	< 0.0600 UJ	< 0.140 UJ	< 0.0900 UJ	< 3.50 UJ
MWA-4	< 0.200 U	< 0.260 U	< 0.220 U	< 0.160 U	< 4.70 UJ	< 0.220 U	< 0.140 U	< 0.120 U	< 0.280 U	< 0.180 U	< 7.00 UJ
MWA-5	< 0.200 U	< 0.260 U	< 0.220 U	< 0.160 U	< 4.70 U	< 0.220 U	< 0.140 U	< 0.120 U	< 0.280 U	< 0.180 U	< 7.00 UJ
MWA-6R	< 2.00 U	< 2.60 U	< 2.20 U	< 1.60 U	< 47.0 U	< 2.20 U	< 1.40 U	< 1.20 U	< 2.80 U	< 1.80 U	< 70.0 U
MWA-7(I)	< 0.500 U	< 0.650 U	< 0.550 U	< 0.400 U	< 11.8 U	< 0.550 U	< 0.350 U	< 0.300 U	< 0.700 U	< 0.450 U	< 17.5 U
MWA-8I	< 2.00 U	< 2.60 U	< 2.20 U	< 1.60 U	< 47.0 U	< 2.20 U	< 1.40 U	< 1.20 U	< 2.80 U	< 1.80 U	< 70.0 UJ
MWA-9I	< 100 U	< 130 U	< 110 U	< 80.0 U	< 2350 U	< 110 U	< 70.0 U	< 60.0 U	< 140 U	< 90.0 U	< 3500 U
MWA-10I	< 10.0 U	< 13.0 U	< 11.0 U	< 8.00 U	< 235 UJ	< 11.0 U	< 7.00 U	< 6.00 U	< 14.0 U	< 9.00 U	< 350 UJ
MWA-11I(D)	< 0.100 U	< 0.130 U	< 0.110 U	< 0.0800 U	< 2.35 UJ	< 0.110 U	< 0.0700 U	< 0.0600 U	< 0.140 U	< 0.0900 U	< 3.50 U
MWA-12I(D)	< 0.100 U	< 0.130 U	< 0.110 U	< 0.0800 U	< 2.35 U	< 0.110 U	< 0.0700 U	< 0.0600 U	< 0.140 U	< 0.0900 U	< 3.50 U
MWA-13D	< 1.00 UJ	< 1.30 UJ	< 1.10 UJ	< 0.800 UJ	< 23.5 UJ	< 1.10 UJ	< 0.700 UJ	< 0.600 UJ	< 1.40 UJ	< 0.900 UJ	< 35.0 UJ
MWA-14I(D)	< 0.200 U	< 0.260 U	< 0.220 U	< 0.160 U	< 4.70 U	< 0.220 U	< 0.140 U	< 0.120 U	< 0.280 U	< 0.180 U	< 7.00 UJ
MWA-15R	< 20.0 U	< 26.0 U	< 22.0 U	< 16.0 U	< 470 UJ	< 22.0 U	< 14.0 U	< 12.0 U	< 28.0 U	< 18.0 U	< 700 U
MWA-16I	< 0.200 U	< 0.260 U	< 0.220 U	< 0.160 U	< 4.70 UJ	< 0.220 U	< 0.140 U	< 0.120 U	< 0.280 U	< 0.180 U	< 7.00 UJ
MWA-17SI	< 10.0 UJ	< 13.0 UJ	< 11.0 UJ	< 8.00 UJ	< 235 UJ	< 11.0 UJ	< 7.00 UJ	< 6.00 UJ	< 14.0 UJ	< 9.00 UJ	< 350 UJ
MWA-18	< 0.100 UJ	< 0.130 UJ	< 0.110 UJ	< 0.0800 UJ	< 2.35 UJ	< 0.110 UJ	< 0.0700 UJ	< 0.0600 UJ	< 0.140 UJ	< 0.0900 UJ	< 3.50 UJ
MWA-19	< 0.100 U	< 0.130 U	< 0.110 U	< 0.0800 U	< 2.35 UJ	< 0.110 U	< 0.0700 U	< 0.0600 U	< 0.140 U	< 0.0900 U	< 3.50 UJ
MWA-20	< 2.00 U	< 2.60 U	< 2.20 U	< 1.60 U	< 47.0 U	< 2.20 U	< 1.40 U	< 1.20 U	< 2.80 U	< 1.80 U	< 70.0 U
MWA-22	< 0.500 U	< 0.650 U	< 0.550 U	< 0.400 U	< 11.8 UJ	< 0.550 U	< 0.350 U	< 0.300 U	< 0.700 U	< 0.450 U	< 17.5 U
MWA-24	< 0.100 U	< 0.130 U	< 0.110 U	< 0.0800 U	< 2.35 U	< 0.110 U	< 0.0700 U	< 0.0600 U	< 0.140 U	< 0.0900 U	< 3.50 UJ
MWA-30	< 0.400 UJ	< 0.520 UJ	< 0.440 UJ	< 0.320 UJ	< 9.40 UJ	< 0.440 UJ	< 0.280 UJ	< 0.240 UJ	< 0.560 UJ	< 0.360 UJ	< 14.0 UJ
MWA-31I(D)	< 2 UJT	< 1 UJT	< 2 UJT	< 2 UJT	< 10 UJT	< 1 UJT	< 2 UJT	< 1 UJT	< 1 UJT	< 1 UJT	< 20 UJT
MWA-32I	< 0.200 UJ	< 0.260 UJ	< 0.220 UJ	< 0.160 UJ	< 4.70 UJ	< 0.220 UJ	< 0.140 UJ	< 0.120 UJ	< 0.280 UJ	< 0.180 UJ	< 7.00 UJ
MWA-34I	< 50 UT	< 25 UT	< 50.0 UT	< 50 UT	< 250 UJT	< 25 UT	< 50.0 UT	< 25.0 UT	< 25.0 UT	< 25 UT	< 500 UJT
MWA-42	< 0.500 U	< 0.650 U	< 0.550 U	< 0.400 U	< 11.8 U	< 0.550 U	< 0.350 U	< 0.300 U	< 0.700 U	< 0.450 U	< 17.5 U
MWA-44	< 0.200 U	< 0.260 U	< 0.220 U	< 0.160 U	< 4.70 UJ	< 0.220 U	< 0.140 U	< 0.120 U	< 0.280 U	< 0.180 U	< 7.00 UJ
MWA-45	< 0.100 U	< 0.130 U	< 0.110 U	< 0.0800 U	< 2.35 U	< 0.110 U	< 0.0700 U	< 0.0600 U	< 0.140 U	< 0.0900 U	< 3.50 U
MWA-46	< 0.200 U	< 0.260 U	< 0.220 U	< 0.160 U	< 4.70 U	< 0.220 U	< 0.140 U	< 0.120 U	< 0.280 U	< 0.180 U	< 7.00 UJ
MWA-47	< 0.200 U	< 0.260 U	< 0.220 U	< 0.160 U	< 4.70 U	< 0.220 U	< 0.140 U	< 0.120 U	< 0.280 U	< 0.180 U	< 7.00 UJ
MWA-49I	< 2.00 U	< 2.60 U	< 2.20 U	< 1.60 U	< 47.0 U	< 2.20 U	< 1.40 U	< 1.20 U	< 2.80 U	< 1.80 U	< 70.0 UJ
MWA-50I	< 0.200 U	< 0.260 U	< 0.220 U	**0.24** J	< 4.70 U	< 0.220 U	< 0.140 U	< 0.120 U	< 0.280 U	< 0.180 U	< 7.00 UJ
MWA-51I	< 0.500 UJ	< 0.650 UJ	< 0.550 UJ	< 0.400 UJ	< 11.8 UJ	< 0.550 UJ	< 0.350 UJ	< 0.300 UJ	< 0.700 UJ	< 0.450 UJ	< 17.5 UJ
MWA-54I	< 0.500 U	< 0.650 U	< 0.550 U	< 0.400 U	< 11.8 UJ	< 0.550 U	< 0.350 U	< 0.300 U	< 0.700 U	< 0.450 U	< 17.5 U
MWA-55I	< 0.500 U	< 0.650 U	< 0.550 U	< 0.400 U	< 11.8 U	< 0.550 U	< 0.350 U	< 0.300 U	< 0.700 U	< 0.450 U	< 17.5 U
MWA-56D	< 1.00 U	< 1.30 U	< 1.10 U	< 0.800 U	< 23.5 U	< 1.10 U	< 0.700 U	< 0.600 U	< 1.40 U	< 0.900 U	< 35.0 UJ
MWA-57D	< 0.500 U	< 0.650 U	< 0.550 U	< 0.400 U	< 11.8 U	< 0.550 U	< 0.350 U	< 0.300 U	< 0.700 U	< 0.450 U	< 17.5 U
MWA-58D	< 2.00 U	< 2.60 U	< 2.20 U	< 1.60 U	< 47.0 UJ	< 2.20 U	< 1.40 U	< 1.20 U	< 2.80 U	< 1.80 U	< 70.0 UJ
MWA-59D	< 0.100 U	< 0.130 U	< 0.110 U	< 0.0800 U	< 2.35 U	< 0.110 U	< 0.0700 U	< 0.0600 U	< 0.140 U	< 0.0900 U	< 3.50 UJ
MWA-60	< 0.500 U	< 0.650 U	< 0.550 U	< 0.400 U	< 11.8 UJ	< 0.550 U	< 0.350 U	< 0.300 U	< 0.700 U	< 0.450 U	< 17.5 UJ
MWA-61	< 2.00 UJ	< 2.60 UJ	< 2.20 UJ	< 1.60 UJ	< 47.0 UJ	< 2.20 UJ	< 1.40 UJ	< 1.20 UJ	< 2.80 UJ	< 1.80 UJ	< 70.0 UJ
MWA-62	< 0.100 U	< 0.130 U	< 0.110 U	< 0.0800 U	< 2.35 U	< 0.110 U	< 0.0700 U	< 0.0600 U	< 0.140 U	< 0.0900 U	< 3.50 U
MWA-63	< 20.0 U	< 26.0 U	< 22.0 U	< 16.0 U	< 470 U	< 22.0 U	< 14.0 U	< 12.0 U	< 28.0 U	< 18.0 U	< 700 UJ
MWA-64I	< 5.00 U	< 6.50 U	< 5.50 U	< 4.00 U	< 118 U	< 5.50 U	< 3.50 U	< 3.00 U	< 7.00 U	< 4.50 U	< 175 UJ
MWA-65I	< 5.00 U	< 6.50 U	< 5.50 U	< 4.00 U	< 118 U	< 5.50 U	< 3.50 U	< 3.00 U	< 7.00 U	< 4.50 U	< 175 U
MWA-66I	< 10.0 U	< 13.0 U	< 11.0 U	< 8.00 U	< 235 UJ	< 11.0 U	< 7.00 U	< 6.00 U	< 14.0 U	< 9.00 U	< 350 UJ
MWA-67SI	< 100 U	< 130 U	< 110 U	< 80.0 U	< 2350 U	< 110 U	< 70.0 U	< 60.0 U	< 140 U	< 90.0 U	< 3500 UJ
MWA-68SI	< 10.0 U	< 13.0 U	< 11.0 U	< 8.00 U	< 235 UJ	< 11.0 U	< 7.00 U	< 6.00 U	< 14.0 U	< 9.00 U	< 350 UJ
MWA-69	< 10.0 U	< 13.0 U	< 11.0 U	< 8.00 U	< 235 UJ	< 11.0 U	< 7.00 U	< 6.00 U	< 14.0 U	< 9.00 U	< 350 UJ
MWA-71	< 0.200 U	< 0.260 U	< 0.220 U	< 0.160 U	< 4.70 U	< 0.220 U	< 0.140 U	< 0.120 U	< 0.280 U	< 0.180 U	< 7.00 UJ
MWA-72	< 0.100 U	< 0.130 U	< 0.110 U	**0.21** J	< 2.35 U	< 0.110 U	< 0.0700 U	< 0.0600 U	< 0.140 U	< 0.0900 U	< 3.50 U
MWA-73	< 0.100 U	< 0.130 U	< 0.110 U	< 0.0800 U	< 2.35 U	< 0.110 U	< 0.0700 U	< 0.0600 U	< 0.140 U	< 0.0900 U	< 3.50 U
MWA-74I	< 0.100 U	< 0.130 U	< 0.110 U	< 0.0800 U	< 2.35 U	< 0.110 U	< 0.0700 U	< 0.0600 U	< 0.140 U	< 0.0900 U	< 3.50 UJ
MWA-75I	< 0.100 U	< 0.130 U	< 0.110 U	< 0.0800 U	< 2.35 U	< 0.110 U	< 0.0700 U	< 0.0600 U	< 0.140 U	< 0.0900 U	< 3.50 U
MWA-75I	< 0.100 U	< 0.130 U	< 0.110 U	< 0.0800 U	< 2.35 U	< 0.110 U	< 0.0700 U	< 0.0600 U	< 0.140 U	< 0.0900 U	< 3.50 U
MWA-76G	< 0.100 U	< 0.130 U	< 0.110 U	< 0.0800 U	< 2.35 U	< 0.110 U	< 0.0700 U	< 0.0600 U	< 0.140 U	< 0.0900 U	< 3.50 UJ
MWA-77G	< 0.100 U	< 0.130 U	< 0.110 U	< 0.0800 U	< 2.35 U	< 0.110 U	< 0.0700 U	< 0.0600 U	< 0.140 U	< 0.0900 U	< 3.50 U
NMP-3D	< 50 UT	< 25 UT	< 50.0 UT	< 50 UT	< 250 UJT	< 25 UT	< 50.0 UT	< 25.0 UT	< 25.0 UT	< 25 UT	< 500 UT
NMP-4D	< 100 U	< 130 U	< 110 U	< 80.0 U	< 2350 UJ	< 110 U	< 70.0 U	< 60.0 U	< 140 U	< 90.0 U	< 3500 U
PMP-4	< 2.00 U	< 2.60 U	< 2.20 U	< 1.60 U	< 47.0 UJ	< 2.20 U	< 1.40 U	< 1.20 U	< 2.80 U	< 1.80 U	< 70.0 UJ
PMP-6	< 2.00 U	< 2.60 U	< 2.20 U	< 1.60 U	< 47.0 UJ	< 2.20 U	< 1.40 U	< 1.20 U	< 2.80 U	< 1.80 U	< 70.0 UJ
PMP-5	< 2.00 U	< 2.60 U	< 2.20 U	< 1.60 U	< 47.0 UJ	< 2.20 U	< 1.40 U	< 1.20 U	< 2.80 U	< 1.80 U	< 70.0 UJ
RP-02-49	< 0.500 U	< 0.650 U	< 0.550 U	< 0.400 U	< 11.8 UJ	< 0.550 U	< 0.350 U	< 0.300 U	< 0.700 U	< 0.450 U	< 17.5 UJ
RP-02-66	< 0.500 U	< 0.650 U	< 0.550 U	< 0.400 U	< 11.8 U	< 0.550 U	< 0.350 U	**4.15**	< 0.700 U	< 0.450 U	< 17.5 U
RP-08-23	< 0.200 U	< 0.260 U	< 0.220 U	< 0.160 U	< 4.70 UJ	< 0.220 U	< 0.140 U	< 0.120 U	< 0.280 U	< 0.180 U	< 7.00 UJ
RP-08-80	< 2.00 U	< 2.60 U	< 2.20 U	< 1.60 U	< 47.0 UJ	< 2.20 U	< 1.40 U	**11.6**	< 2.80 U	< 1.80 U	< 70.0 UJ
RP-08-107	< 2.00 U	< 2.60 U	< 2.20 U	< 1.60 U	< 47.0 UJ	< 2.20 U	< 1.40 U	**23.4**	< 2.80 U	< 1.80 U	< 70.0 UJ
RP-09-35	< 0.200 U	< 0.260 U	< 0.220 U	< 0.160 U	< 4.70 UJ	< 0.220 U	< 0.140 U	< 0.120 U	< 0.280 U	< 0.180 U	< 7.00 UJ
RP-09-47	< 0.100 U	< 0.130 U	< 0.110 U	< 0.0800 U	< 2.35 UJ	< 0.110 U	< 0.0700 U	< 0.0600 U	< 0.140 U	< 0.0900 U	< 3.50 UJ
RP-09-64	< 0.100 U	< 0.130 U	< 0.110 U	< 0.0800 U	< 2.35 UJ	< 0.110 U	< 0.0700 U	< 0.0600 U	< 0.140 U	< 0.0900 U	< 3.50 UJ
RP-10-30	< 0.100 UJ	< 0.130 UJ	< 0.110 UJ	**0.22** J	< 2.35 UJ	< 0.110 UJ	**0.11** J	< 0.0600 UJ	< 0.140 UJ	< 0.0900 UJ	< 3.50 UJ
RP-10-60	< 0.100 UJ	< 0.130 UJ	< 0.110 UJ	< 0.0800 UJ	< 2.35 UJ	< 0.110 UJ	< 0.0700 UJ	< 0.0600 UJ	< 0.140 UJ	< 0.0900 UJ	< 3.50 UJ
RP-10-97	< 0.100 UJ	< 0.130 UJ	< 0.110 UJ	< 0.0800 UJ	< 2.35 UJ	< 0.110 UJ	< 0.0700 UJ	< 0.0600 UJ	< 0.140 UJ	< 0.0900 UJ	< 3.50 UJ
RP-10-130	< 0.100 UJ	< 0.130 UJ	< 0.110 UJ	< 0.0800 UJ	< 2.35 UJ	< 0.110 UJ	< 0.0700 UJ	< 0.0600 UJ	< 0.140 UJ	< 0.0900 UJ	< 3.50 UJ
RP-13-11	< 0.100 U	< 0.130 U	< 0.110 U	< 0.0800 U	< 2.35 U	< 0.110 U	< 0.0700 U	< 0.0600 U	< 0.140 U	< 0.0900 U	< 3.50 U
RP-13-22	< 0.100 U	< 0.130 U	< 0.110 U	< 0.0800 U	< 2.35 U	< 0.110 U	< 0.0700 U	< 0.0600 U	< 0.140 U	< 0.0900 U	< 3.50 U
RP-13-33	< 0.500 U	< 0.650 U	< 0.550 U	< 0.400 U	< 11.8 UJ	< 0.550 U	< 0.350 U	< 0.300 U	< 0.700 U	< 0.450 U	< 17.5 U
RP-13-43	< 1.00 U	< 1.30 U	< 1.10 U	< 0.800 U	< 23.5 UJ	< 1.10 U	< 0.700 U	**11.9**	< 1.40 U	< 0.900 U	< 35.0 U
RP-14-26	< 2 UT	< 1 UT	< 2.00 UT	< 2 UT	< 10 UJT	< 1 UT	< 2.00 UT	< 1.00 UT	< 1.00 UT	< 1 UT	< 20 UT
RP-14-39	< 0.200 U	< 0.260 U	< 0.220 U	< 0.160 U	< 4.70 UJ	< 0.220 U	< 0.140 U	< 0.120 U	< 0.280 U	< 0.180 U	< 7.00 U
W-19-D	< 10 UT	< 5 UT	< 10.0 UT	< 10 UT	< 50 UT	< 5 UT	< 10.0 UT	**8.75** T	< 5.00 UT	< 5 UT	< 100 UT
W-19-I	< 0.100 U	< 0.130 U	< 0.110 U	< 0.0800 U	< 2.35 U	< 0.110 U	< 0.0700 U	**0.09** J	< 0.140 U	< 0.0900 U	< 3.50 U

Table 2
Volatile Organic Compounds Results
August 2009 Sitewide Groundwater Monitoring
Arkema, Inc. Facility
Portland, Oregon

Wells	Aquifer	Sample ID	Sample Date	2-Hexanone ug/l	2-Phenylbutane (sec-Butylbenzene) ug/l	4-Chlorotoluene ug/l	4-Methyl-2-pentanone ug/l	Acetone ug/l	Benzene ug/l	Bromobenzene ug/l	Bromodichloromethane ug/l	Bromoform ug/l	Carbon disulfide ug/l	Carbon tetrachloride ug/l	Chlorobenzene ug/l	Chlorobromomethane (Bromochloro-methane) ug/l	Chloroethane ug/l	Chloroform ug/l	Cis-1,2-Dichloroethene ug/l	Cis-1,3-Dichloropropene ug/l	Cumene (Isopropylbenzene) ug/l	Cymene ug/l	Dibromochloromethane ug/l
MWA-2	Shallow	MWA-2-080609	08/06/2009	< 1810 U	< 40.0 U	< 55.0 U	< 145 U	< 3880 UJ	< 45.0 U	< 50.0 U	< 55.0 U	< 50.0 U	< 70.0 U	< 30.0 U	**18200**	< 90.0 U	< 55.0 U	**50** J	< 45.0 U	< 45.0 U	< 35.0 U	< 30.0 U	< 35.0 U
MWA-3	Shallow	MWA-3-081009	08/10/2009	< 3.62 UJ	< 0.0800 UJ	< 0.110 UJ	< 0.290 UJ	< 7.76 UJ	< 0.0900 UJ	< 0.100 UJ	< 0.110 UJ	< 0.100 UJ	< 0.140 UJ	< 0.0600 UJ	**5.85** J	< 0.180 UJ	< 0.110 UJ	**22.2** J	**1.34** J	< 0.0900 UJ	< 0.0700 UJ	< 0.0600 UJ	< 0.0700 UJ
MWA-4	Shallow	MWA-4-081109	08/11/2009	< 7.24 U	< 0.160 U	< 0.220 U	< 0.580 U	< 15.5 UJ	< 0.180 U	< 0.200 U	< 0.220 U	< 0.200 U	< 0.280 U	< 0.120 U	**36.4**	< 0.360 U	< 0.220 U	**1.1**	**5.08**	< 0.180 U	< 0.140 U	< 0.120 U	< 0.140 U
MWA-5	Shallow	MWA-5-080509	08/05/2009	< 7.24 U	< 0.160 U	< 0.220 U	< 0.580 U	< 15.5 UJ	< 0.180 U	< 0.200 U	< 0.220 U	< 0.200 U	< 0.280 U	< 0.120 U	**14.6**	< 0.360 U	**0.74** J	< 0.180 U	< 0.180 U	< 0.180 U	< 0.140 U	< 0.120 U	< 0.140 U
MWA-6R	Shallow	MWA-6R-081109	08/11/2009	< 72.4 U	< 1.60 U	< 2.20 U	< 5.80 U	< 155 U	< 1.80 U	< 2.00 U	< 2.20 U	< 2.00 U	< 2.80 U	< 1.20 U	**1520**	< 3.60 U	< 2.20 U	< 1.80 U	**9** J	< 1.80 U	< 1.40 U	< 1.20 U	< 1.40 U
MWA-7(I)	Intermediate	MWA-7(I)-081409	08/14/2009	< 18.1 U	< 0.400 U	< 0.550 U	< 1.45 U	< 38.8 U	< 0.450 U	< 0.500 U	< 0.550 U	< 0.500 U	< 0.700 U	< 0.300 U	< 0.250 U	< 0.900 U	< 0.550 U	< 0.450 U	< 0.450 U	< 0.450 U	< 0.350 U	< 0.300 U	< 0.350 U
MWA-8I	Intermediate	MWA-8I-080609	08/06/2009	< 72.4 U	< 1.60 U	< 2.20 U	< 5.80 U	< 155 UJ	< 1.80 U	< 2.00 U	< 2.20 U	< 2.00 U	< 2.80 U	< 1.20 U	**746**	< 3.60 U	< 2.20 U	< 1.80 U	< 1.80 U	< 1.80 U	< 1.40 U	< 1.20 U	< 1.40 U
MWA-9I	Intermediate	MWA-9I-081109	08/11/2009	< 3620 U	< 80.0 U	< 110 U	< 290 U	< 7760 U	< 90.0 U	< 100 U	< 110 U	< 100 U	< 140 U	< 60.0 U	**61600**	< 180 U	< 110 U	< 90.0 U	< 90.0 U	< 90.0 U	< 70.0 U	< 60.0 U	< 70.0 U
MWA-10I	Intermediate	MWA-10I-081109	08/11/2009	< 362 U	< 8.00 U	< 11.0 U	< 29.0 U	< 776 UJ	< 9.00 U	< 10.0 U	< 11.0 U	< 10.0 U	< 14.0 U	< 6.00 U	**7050**	< 18.0 U	< 11.0 U	< 9.00 U	< 9.00 U	< 9.00 U	< 7.00 U	< 6.00 U	< 7.00 U
MWA-11I(D)	Deep	MWA-11I-081909	08/19/2009	< 3.62 U	< 0.0800 U	< 0.110 U	< 0.290 U		**0.1** J	< 0.100 U	< 0.110 U	< 0.100 U	< 0.140 U	< 0.0600 U	< 0.0500 U	< 0.180 UJ	< 0.110 U	< 0.0900 U	< 0.0900 U	< 0.0900 U	< 0.0700 U	< 0.0600 U	< 0.0700 U
MWA-12I(D)	Deep	MWA-12I(D)-081409	08/14/2009	< 3.62 U	< 0.0800 U	< 0.110 U	< 0.290 U	< 7.76 U	< 0.0900 U	< 0.100 U	< 0.110 U	< 0.100 U	< 0.140 U	< 0.0600 U	< 0.0500 U	< 0.180 U	< 0.110 U	< 0.0900 U	< 0.0900 U	< 0.0900 U	< 0.0700 U	< 0.0600 U	< 0.0700 U
MWA-13D	Deep	MWA-13D-081009	08/10/2009	< 36.2 UJ	< 0.800 UJ	< 1.10 UJ	< 2.90 UJ	< 77.6 UJ	< 0.900 U	< 1.00 UJ	< 1.10 UJ	< 1.00 UJ	< 1.40 UJ	< 0.600 UJ	**520** J	< 1.80 UJ	< 1.10 UJ	**2.1** J	< 0.900 UJ	< 0.900 UJ	< 0.700 UJ	< 0.600 UJ	< 0.700 UJ
MWA-14I(D)	Deep	MWA-14I(D)-080509	08/05/2009	< 7.24 U	< 0.160 U	< 0.220 U	< 0.580 U	< 15.5 UJ	< 0.180 U	< 0.200 U	< 0.220 U	< 0.200 U	< 0.280 U	< 0.120 U	< 0.100 U	< 0.360 U	< 0.220 U	< 0.180 U	< 0.180 U	< 0.180 U	< 0.140 U	< 0.120 U	< 0.140 U
MWA-15R	Shallow	MWA-15R-081909	08/19/2009	< 724 U	< 16.0 U	< 22.0 U	< 58.0 U		< 18.0 U	< 20.0 U	< 22.0 U	< 20.0 U	< 28.0 U	< 12.0 U	**23500**	< 36.0 UJ	< 22.0 U	**122**	< 18.0 U	< 18.0 U	< 14.0 U	< 12.0 U	< 14.0 U
MWA-16I	Intermediate	MWA-16I-081109	08/11/2009	< 7.24 U	< 0.160 U	< 0.220 U	< 0.580 U	< 15.5 UJ	< 0.180 U	< 0.200 U	< 0.220 U	< 0.200 U	< 0.280 U	< 0.120 U	**90.5**	< 0.360 U	< 0.220 U	< 0.180 U	**0.62** J	< 0.180 U	< 0.140 U	< 0.120 U	< 0.140 U
MWA-17SI	Shallow	MWA-17SI-081009	08/10/2009	< 362 UJ	< 8.00 UJ	< 11.0 UJ	< 29.0 UJ	< 776 UJ	< 9.00 UJ	< 10.0 UJ	< 11.0 UJ	< 10.0 UJ	< 14.0 UJ	< 6.00 UJ	**6870** J	< 18.0 UJ	< 11.0 UJ	**153** J	< 9.00 UJ	< 9.00 UJ	< 7.00 UJ	< 6.00 UJ	< 7.00 UJ
MWA-18	Shallow	MWA-18-081009	08/10/2009	< 3.62 UJ	< 0.0800 UJ	< 0.110 UJ	< 0.290 UJ	< 7.76 UJ	< 0.0900 UJ	< 0.100 UJ	< 0.110 UJ	< 0.100 UJ	**0.14** J	< 0.0600 UJ	**0.93** J	< 0.180 UJ	< 0.110 UJ	**0.3** J	**0.98** J	< 0.0900 UJ	< 0.0700 UJ	< 0.0600 UJ	< 0.0700 UJ
MWA-19	Shallow	MWA-19-081009	08/10/2009	< 3.62 U	< 0.0800 U	< 0.110 U	< 0.290 U	< 7.76 UJ	< 0.0900 U	< 0.100 U	< 0.110 U	< 0.100 U	< 0.140 U	< 0.0600 U	**0.39** J	< 0.180 U	< 0.110 U	**0.21** J	**0.82**	< 0.0900 U	< 0.0700 U	< 0.0600 U	< 0.0700 U
MWA-20	Shallow	MWA-20-081709	08/17/2009	< 72.4 U	< 1.60 U	< 2.20 U	< 5.80 U	< 155 U	**4** J	< 2.00 U	< 2.20 U	< 2.00 U	< 2.80 U	< 1.20 U	**1780**	< 3.60 U	< 2.20 U	< 1.80 U	< 1.80 U	< 1.80 U	< 1.40 U	< 1.20 U	< 1.40 U
MWA-22	Shallow	MWA-22-081909	08/19/2009	< 18.1 U	< 0.400 U	< 0.550 U	< 1.45 U	**83** J	**1.45**	< 0.500 U	< 0.550 U	< 0.500 U	**1.5**	< 0.300 U	**123**	< 0.900 UJ	< 0.550 U	< 0.450 U	**36.5**	< 0.450 U	< 0.350 U	**0.65**	< 0.350 U
MWA-24	Shallow	MWA-24-080509	08/05/2009	< 3.62 U	< 0.0800 U	< 0.110 U	< 0.290 U	< 7.76 UJ	**0.11** J	< 0.100 U	< 0.110 U	< 0.100 U	< 0.140 U	< 0.0600 U	< 0.0500 U	< 0.180 U	< 0.110 U	< 0.0900 U	< 0.0900 U	< 0.0900 U	< 0.0700 U	< 0.0600 U	< 0.0700 U
MWA-30	Shallow	MWA-30-081009	08/10/2009	< 14.5 UJ	< 0.320 UJ	< 0.440 UJ	< 1.16 UJ	< 31.0 UJ	< 0.360 UJ	< 0.400 UJ	< 0.440 UJ	< 0.400 UJ	< 0.560 UJ	< 0.240 UJ	< 0.200 UJ	< 0.720 UJ	< 0.440 UJ	< 0.360 UJ	< 0.360 UJ	< 0.360 UJ	< 0.280 UJ	< 0.240 UJ	< 0.280 UJ
MWA-31I(D)	Deep	MWA-31I(D)-081009	08/10/2009	< 20 UJT	< 2 UJT	< 2 UJT	< 10 UJT	< 40 UJT	< 1 UJT	< 1 UJT	< 1 UJT	< 1 UJT	**0.66** JT	< 1 UJT	< 1 UJT	< 1 UJT	< 1 UJT	**16.4** JT	< 1 UJT	< 1 UJT	< 4 UJT	< 4 UJT	< 1 UJT
MWA-32I	Intermediate	MWA-32I-081009	08/10/2009	< 7.24 UJ	< 0.160 UJ	< 0.220 UJ	< 0.580 UJ	< 15.5 UJ	< 0.180 UJ	< 0.200 UJ	< 0.220 UJ	< 0.200 UJ	< 0.280 UJ	< 0.120 UJ	**0.18** J	< 0.360 UJ	< 0.220 UJ	**2.74** J	< 0.180 UJ	< 0.180 UJ	< 0.140 UJ	< 0.120 UJ	< 0.140 UJ
MWA-34I	Intermediate	MWA-34I-081109	08/11/2009	< 500 UT	< 50.0 UT	< 50.0 UT	< 250 UT	< 1000 UJT	< 61 UT	< 25.0 UT	< 25 UT	< 25 UT	< 50 UT	< 25.0 UT	**3270** T	< 25 UT	< 25 UT	< 25 UT	< 25.0 UT	< 25.0 UT	< 100 UT	< 100 UT	< 25.0 UT
MWA-42	Shallow	MWA-42-081709	08/17/2009	< 18.1 U	< 0.400 U	< 0.550 U	< 1.45 U	< 38.8 U	< 0.450 U	< 0.500 U	< 0.550 U	< 0.500 U	**0.9** J	< 0.300 U	**129**	< 0.900 U	< 0.550 U	**1.15** J	< 0.450 U	< 0.450 U	< 0.350 U	< 0.300 U	< 0.350 U
MWA-44	Shallow	MWA-44-081109	08/11/2009	< 7.24 U	< 0.160 U	< 0.220 U	< 0.580 U	< 15.5 UJ	< 0.180 U	< 0.200 U	< 0.220 U	< 0.200 U	< 0.280 U	< 0.120 U	**5.48**	< 0.360 U	< 0.220 U	< 0.180 U	**1.64**	< 0.180 U	< 0.140 U	< 0.120 U	< 0.140 U
MWA-45	Shallow	MWA-45-081709	08/17/2009	< 3.62 U	< 0.0800 U	< 0.110 U	< 0.290 U	< 7.76 U	**0.15** J	< 0.100 U	< 0.110 U	< 0.100 U	< 0.140 U	< 0.0600 U	**1.37**	< 0.180 U	< 0.110 U	**0.43** J	**0.35** J	< 0.0900 U	< 0.0700 U	< 0.0600 U	< 0.0700 U
MWA-46	Shallow	MWA-46-081009	08/10/2009	< 7.24 U	< 0.160 U	< 0.220 U	< 0.580 U	< 15.5 UJ	< 0.180 U	< 0.200 U	< 0.220 U	< 0.200 U	< 0.280 U	< 0.120 U	**1.54**	< 0.360 U	< 0.220 U	< 0.180 U	**1.84**	< 0.180 U	< 0.140 U	< 0.120 U	< 0.140 U
MWA-47	Shallow	MWA-47-080609	08/06/2009	< 7.24 U	< 0.160 U	< 0.220 U	< 0.580 U	< 15.5 UJ	< 0.180 U	< 0.200 U	< 0.220 U	< 0.200 U	< 0.280 U	< 0.120 U	**0.88** J	< 0.360 U	< 0.220 U	**0.24** J	< 0.180 U	< 0.180 U	< 0.140 U	< 0.120 U	< 0.140 U
MWA-49I	Intermediate	MWA-49I-081009	08/10/2009	< 72.4 U	< 1.60 U	< 2.20 U	< 5.80 U	< 155 UJ	< 1.80 U	< 2.00 U	**4** J	< 2.00 U	< 2.80 U	< 1.20 U	< 1.00 U	< 3.60 U	< 2.20 U	**364**	< 1.80 U	< 1.80 U	< 1.40 U	< 1.20 U	< 1.40 U
MWA-50I	Intermediate	MWA-50I-080609	08/06/2009	< 7.24 U	< 0.160 U	< 0.220 U	< 0.580 U	< 15.5 UJ	< 0.180 U	< 0.200 U	< 0.220 U	< 0.200 U	< 0.280 U	< 0.120 U	**0.68** J	< 0.360 U	< 0.220 U	< 0.180 U	< 0.180 U	< 0.180 U	< 0.140 U	< 0.120 U	< 0.140 U
MWA-51I	Intermediate	MWA-51I-081009	08/10/2009	< 18.1 UJ	< 0.400 UJ	< 0.550 UJ	< 1.45 UJ	< 38.8 UJ	< 0.450 U	< 0.500 UJ	< 0.550 UJ	< 0.500 UJ	< 0.700 UJ	< 0.300 UJ	**336** J	< 0.900 UJ	< 0.550 UJ	**0.7** J	< 0.450 UJ	< 0.450 UJ	< 0.350 UJ	< 0.300 UJ	< 0.350 UJ
MWA-54I	Intermediate	MWA-54I-081909	08/19/2009	< 18.1 U	< 0.400 U	< 0.550 U	< 1.45 U		**0.5** J	< 0.500 U	< 0.550 U	< 0.500 U	< 0.700 U	< 0.300 U	**7.3**	< 0.900 UJ	< 0.550 U	< 0.450 U	< 0.450 U	< 0.450 U	< 0.350 U	< 0.300 U	< 0.350 U
MWA-55I	Intermediate	MWA-55I-081709	08/17/2009	< 18.1 U	< 0.400 U	< 0.550 U	< 1.45 U	< 38.8 U	< 0.450 U	< 0.500 U	< 0.550 U	< 0.500 U	< 0.700 U	< 0.300 U	**0.9** J	< 0.900 U	< 0.550 U	**59.8**	< 0.450 U	< 0.450 U	< 0.350 U	< 0.300 U	< 0.350 U
MWA-56D	Deep	MWA-56D-081009	08/10/2009	< 36.2 U	< 0.800 U	< 1.10 U	< 2.90 U	< 77.6 UJ	< 0.900 U	< 1.00 U	**6.7**	**3.6** J	< 1.40 U	< 0.600 U	< 0.500 U	< 1.80 U	< 1.10 U	**328**	< 0.900 U	< 0.900 U	< 0.700 U	< 0.600 U	**2.9** J
MWA-57D	Deep	MWA-57D-081709	08/17/2009	< 18.1 U	< 0.400 U	< 0.550 U	< 1.45 U	< 38.8 U	< 0.450 U	< 0.500 U	< 0.550 U	< 0.500 U	< 0.700 U	< 0.300 U	< 0.250 U	< 0.900 U	< 0.550 U	**35.8**	< 0.450 U	< 0.450 U	< 0.350 U	< 0.300 U	< 0.350 U
MWA-58D	Deep	MWA-58D-081009	08/10/2009	< 72.4 U	< 1.60 U	< 2.20 U	< 5.80 U	< 155 UJ	< 1.80 U	< 2.00 U	**4.2** J	< 2.00 U	< 2.80 U	< 1.20 U	**2** J	< 3.60 U	< 2.20 U	**476**	< 1.80 U	< 1.80 U	< 1.40 U	< 1.20 U	< 1.40 U
MWA-59D	Deep	MWA-59D-080609	08/06/2009	< 3.62 U	< 0.0800 U	< 0.110 U	< 0.290 U	< 7.76 UJ	< 0.0900 U	< 0.100 U	< 0.110 U	< 0.100 U	< 0.140 U	< 0.0600 U	**0.27** J	< 0.180 U	< 0.110 U	**8.32**	< 0.0900 U	< 0.0900 U	< 0.0700 U	< 0.0600 U	< 0.0700 U
MWA-60	Shallow	MWA-60-080509	08/05/2009	< 18.1 U	< 0.400 U	< 0.550 U	< 1.45 U	< 38.8 UJ	**0.8** J	< 0.500 U	< 0.550 U	< 0.500 U	< 0.700 U	< 0.300 U	**247**	< 0.900 U	< 0.550 U	< 0.450 U	**7.4**	< 0.450 U	< 0.350 U	< 0.300 U	< 0.350 U
MWA-61	Shallow	MWA-61-081009	08/10/2009	< 72.4 UJ	< 1.60 UJ	< 2.20 UJ	< 5.80 UJ	< 155 UJ	< 1.80 UJ	< 2.00 UJ	< 2.20 UJ	< 2.00 UJ	< 2.80 UJ	< 1.20 UJ	**715** J	< 3.60 UJ	< 2.20 UJ	**93.6** J	< 1.80 UJ	< 1.80 UJ	< 1.40 UJ	< 1.20 UJ	< 1.40 UJ
MWA-62	Shallow	MWA-62-081709	08/17/2009	< 3.62 U	< 0.0800 U	< 0.110 U	< 0.290 U	< 7.76 U	< 0.0900 U	< 0.100 U	< 0.110 U	< 0.100 U	< 0.140 U	< 0.0600 U	**2.62**	< 0.180 U	< 0.110 U	**5.51**	**0.36** J	< 0.0900 U	< 0.0700 U	< 0.0600 U	< 0.0700 U
MWA-63	Shallow	MWA-63-080509	08/05/2009	< 724 U	< 16.0 U	< 22.0 U	< 58.0 U	< 1550 UJ	< 18.0 U	< 20.0 U	< 22.0 U	< 20.0 U	< 28.0 U	< 12.0 U	< 10.0 U	< 36.0 U	< 22.0 U	**9800**	< 18.0 U	< 18.0 U	< 14.0 U	< 12.0 U	< 14.0 U
MWA-64I	Intermediate	MWA-64I-080609	08/06/2009	< 181 U	< 4.00 U	< 5.50 U	< 14.5 U	< 388 UJ	< 4.50 U	< 5.00 U	< 5.50 U	< 5.00 U	< 7.00 U	< 3.00 U	**2070**	< 9.00 U	< 5.50 U	**256**	< 4.50 U	< 4.50 U	< 3.50 U	< 3.00 U	< 3.50 U
MWA-65I	Intermediate	MWA-65I-081709	08/17/2009	< 181 U	< 4.00 U	< 5.50 U	< 14.5 U	< 388 U	< 4.50 U	< 5.00 U	< 5.50 U	< 5.00 U	< 7.00 U	< 3.00 U	**3050**	< 9.00 U	< 5.50 U	< 4.50 U	< 4.50 U	< 4.50 U	< 3.50 U	< 3.00 U	< 3.50 U
MWA-66I	Intermediate	MWA-66I-081109	08/11/2009	< 362 U	< 8.00 U	< 11.0 U	< 29.0 U	< 776 UJ	< 9.00 U	< 10.0 U	< 11.0 U	< 10.0 U	< 14.0 U	< 6.00 U	**7780**	< 18.0 U	< 11.0 U	**13** J	< 9.00 U	< 9.00 U	< 7.00 U	< 6.00 U	< 7.00 U
MWA-67SI	Shallow	MWA-67SI-080609	08/06/2009	< 3620 U	< 80.0 U	< 110 U	< 290 U	< 7760 UJ	< 90.0 U	< 100 U	< 110 U	< 100 U	< 140 U	**370** J	**200000**	< 180 U	< 110 U	**2240**	< 90.0 U	< 90.0 U	< 70.0 U	< 60.0 U	< 70.0 U
MWA-68SI	Shallow	MWA-68SI-081109	08/11/2009	< 362 U	< 8.00 U	< 11.0 U	< 29.0 U	< 776 UJ	< 9.00 U	< 10.0 U	< 11.0 U	< 10.0 U	< 14.0 U	< 6.00 U	**8080**	< 18.0 U	**267**	**73**	< 9.00 U	< 9.00 U	< 7.00 U	< 6.00 U	< 7.00 U
MWA-69	Shallow	MWA-69-081109	08/11/2009	< 362 U	< 8.00 U	< 11.0 U	< 29.0 U	< 776 UJ	< 9.00 U	< 10.0 U	< 11.0 U	< 10.0 U	< 14.0 U	< 6.00 U	**6930**	< 18.0 U	**586**	**62**	< 9.00 U	< 9.00 U	< 7.00 U	< 6.00 U	< 7.00 U
MWA-71	Shallow	MWA-71-080709	08/07/2009	< 7.24 U	< 0.160 U	< 0.220 U	< 0.580 U	< 15.5 UJ	< 0.180 U	< 0.200 U	< 0.220 U	< 0.200 U	**0.48** J	< 0.120 U	< 0.100 U	< 0.360 U	< 0.220 U	< 0.180 U	< 0.180 U	< 0.180 U	< 0.140 U	< 0.120 U	< 0.140 U
MWA-72	Shallow	MWA-72-081709	08/17/2009	< 3.62 U	< 0.0800 U	< 0.110 U	< 0.290 U	< 7.76 U	**0.38** J	< 0.100 U	< 0.110 U	< 0.100 U	< 0.140 U	< 0.0600 U	**0.42** J	< 0.180 U	< 0.110 U	< 0.0900 U	< 0.0900 U	< 0.0900 U	< 0.0700 U	< 0.0600 U	< 0.0700 U
MWA-73	Shallow	MWA-73-081409	08/14/2009	< 3.62 U	< 0.0800 U	< 0.110 U	< 0.290 U	< 7.76 U	< 0.0900 U	< 0.100 U	< 0.110 U	< 0.100 U	< 0.140 U	< 0.0600 U	**0.63**	< 0.180 U	< 0.110 U	< 0.0900 U	< 0.0900 U	< 0.0900 U	< 0.0700 U	< 0.0600 U	< 0.0700 U
MWA-74I	Intermediate	MWA-74I-080709	08/07/2009	< 3.62 U	< 0.0800 U	< 0.110 U	< 0.290 U	< 7.76 UJ	< 0.0900 U	< 0.100 U	< 0.110 U	< 0.100 U	< 0.140 U	< 0.0600 U	**1.13**	< 0.180 U	< 0.110 U	< 0.0900 U	< 0.0900 U	< 0.0900 U	< 0.0700 U	< 0.0600 U	< 0.0700 U
MWA-75I	Intermediate	MWA-75I-1-081409	08/14/2009	< 3.62 U	< 0.0800 U	< 0.110 U	< 0.290 U	< 7.76 U	< 0.0900 U	< 0.100 U	< 0.110 U	< 0.100 U	< 0.140 U	< 0.0600 U	**0.71**	< 0.180 U	< 0.110 U	< 0.0900 U	< 0.0900 U	< 0.0900 U	< 0.0700 U	< 0.0600 U	< 0.0700 U
MWA-75I	Intermediate	MWA-75I-2-081409	08/14/2009	< 3.62 U	< 0.0800 U	< 0.110 U	< 0.290 U	< 7.76 U	< 0.0900 U	< 0.100 U	< 0.110 U	< 0.100 U	< 0.140 U	< 0.0600 U	**0.85**	< 0.180 U	< 0.110 U	< 0.0900 U	< 0.0900 U	< 0.0900 U	< 0.0700 U	< 0.0600 U	< 0.0700 U
MWA-76G	Gravel	MWA-76G-080709	08/07/2009	< 3.62 U	< 0.0800 U	< 0.110 U	< 0.290 U	< 7.76 UJ	< 0.0900 U	< 0.100 U	< 0.110 U	< 0.100 U	< 0.140 U	< 0.0600 U	< 0.0500 U	< 0.180 U	< 0.110 U	**0.22** J	< 0.0900 U	< 0.0900 U	< 0.0700 U	< 0.0600 U	< 0.0700 U
MWA-77G	Gravel	MWA-77G-081709	08/17/2009	< 3.62 U	< 0.0800 U	< 0.110 U	< 0.290 U	< 7.76 U	**0.31** J	< 0.100 U	< 0.110 U	< 0.100 U	< 0.140 U	< 0.0600 U	< 0.0500 U	< 0.180 U	< 0.110 U	< 0.0900 U	< 0.0900 U	< 0.0900 U	< 0.0700 U	< 0.0600 U	< 0.0700 U
NMP-3D	Shallow	NMP-3D-081909	08/19/2009	< 500 UT	< 50.0 UT	< 50.0 UT	< 250 UT		< 25 UT	< 25.0 UT	< 25 UT	< 25 UT	< 50 UT	< 25.0 UT	**4920** T	< 25 UJT	**31** T	**177** T	< 25.0 UT	< 25.0 UT	< 100 UT	< 100 UT	< 25.0 UT
NMP-4D	Shallow	NMP-4D-081909	08/19/2009	< 3620 U	< 80.0 U	< 110 U	< 290 U		< 90.0 U	< 100 U	< 110 U	< 100 U	< 140 U	< 60.0 U	**112000**	< 180 UJ	< 110 U	**380** J	< 90.0 U	< 90.0 U	< 70.0 U	< 60.0 U	< 70.0 U
PMP-4	Shallow	PMP-4-081109	08/11/2009	< 72.4 U	< 1.60 U	< 2.20 U	< 5.80 U	< 155 UJ	< 1.80 U	< 2.00 U	< 2.20 U	< 2.00 U	< 2.80 U	< 1.20 U	**1120**	< 3.60 U	< 2.20 U	**27.4**	< 1.80 U	< 1.80 U	< 1.40 U	< 1.20 U	< 1.40 U
PMP-6	Shallow	PMP-6-081109	08/11/2009	< 72.4 U	< 1.60 U	< 2.20 U	< 5.80 U	< 155 UJ	< 1.80 U	< 2.00 U	< 2.20 U	< 2.00 U	< 2.80 U	< 1.20 U	**618**	< 3.60 U	**5.2** J	**72**	< 1.80 U	< 1.80 U	< 1.40 U	< 1.20 U	< 1.40 U
PMP-5	Shallow	PMP-5-081109	08/11/2009	< 72.4 U	< 1.60 U	< 2.20 U	< 5.80 U	< 155 UJ	< 1.80 U	< 2.00 U	< 2.20 U	< 2.00 U	< 2.80 U	< 1.20 U	**1420**	< 3.60 U	**3.8** J	**90.4**	< 1.80 U	< 1.80 U	< 1.40 U	< 1.20 U	< 1.40 U
RP-02-49	Intermediate	RP-02-49-081309	08/13/2009	< 18.1 U	< 0.400 U	< 0.550 U	< 1.45 U		< 0.450 U	< 0.500 U	< 0.550 U	< 0.500 U	< 0.700 U	< 0.300 U	**39.1**	< 0.900 U	< 0.550 U	< 0.450 U	**1.1** J	< 0.450 U	< 0.350 U	< 0.300 U	< 0.350 U
RP-02-66	Basalt	RP-02-66-081309	08/13/2009	< 18.1 U	< 0.400 U	< 0.550 U	< 1.45 U	< 38.8 U	< 0.450 U	< 0.500 U	< 0.550 U	< 0.500 U	< 0.700 U	< 0.300 U	**34.8**	< 0.900 U	< 0.550 U	< 0.450 U	**3.05**	< 0.450 U	< 0.350 U	< 0.300 U	< 0.350 U
RP-08-23	Shallow	RP-08-23-081309	08/13/2009	< 7.24 U	< 0.160 U	< 0.220 U	< 0.580 U		**0.32** J	< 0.200 U	< 0.220 U	< 0.200 U	< 0.280 U	< 0.120 U	**26.8**	< 0.360 U	< 0.220 U	< 0.180 U	< 0.180 U	< 0.180 U	< 0.140 U	< 0.120 U	< 0.140 U
RP-08-80	Intermediate	RP-08-80-081309	08/13/2009	< 72.4 U	< 1.60 U	< 2.20 U	< 5.80 U		< 1.80 UJ	< 2.00 U	< 2.20 U	< 2.00 U	< 2.80 U	< 1.20 U	**176**	< 3.60 U	< 2.20 U	< 1.80 U	**4.8** J	< 1.80 U	< 1.40 U	< 1.20 U	< 1.40 U
RP-08-107	Basalt	RP-08-107-081309	08/13/2009	< 72.4 U	< 1.60 U	< 2.20 U	< 5.80 U		**3.6** J	< 2.00 U	< 2.20 U	< 2.00 U	< 2.80 U	< 1.20 U	**350**	< 3.60 U	< 2.20 U	< 1.80 U	**5** J	< 1.80 U	< 1.40 U	< 1.20 U	< 1.40 U
RP-09-35	Shallow	RP-09-35-081209	08/12/2009	< 7.24 U	< 0.160 U	< 0.220 U	< 0.580 U		< 0.180 U	< 0.200 U	< 0.220 U	< 0.200 U	< 0.280 U	< 0.120 U	< 0.100 U	< 0.360 U	< 0.220 U	< 0.180 U	< 0.180 U	< 0.180 U	< 0.140 U	< 0.120 U	< 0.140 U
RP-09-47	Intermediate	RP-09-47-081209	08/12/2009	< 3.62 U	< 0.0800 U	< 0.110 U	< 0.290 U		< 0.0900 U	< 0.100 U	< 0.110 U	< 0.100 U	< 0.140 U	< 0.0600 U	< 0.0500 U	< 0.180 U	< 0.110 U	< 0.0900 U	< 0.0900 U	< 0.0900 U	< 0.0700 U	< 0.0600 U	< 0.0700 U
RP-09-64	Basalt	RP-09-64-081209	08/12/2009	< 3.62 U	< 0.0800 U	< 0.110 U	< 0.290 U		< 0.0900 U	< 0.100 U	< 0.110 U	< 0.100 U	< 0.140 U	< 0.0600 U	**0.08** J	< 0.180 U	< 0.110 U	**0.17** J	< 0.0900 U	< 0.0900 U	< 0.0700 U	< 0.0600 U	< 0.0700 U
RP-10-30	Shallow	RP-10-30-081209	08/12/2009	< 3.62 UJ	< 0.0800 UJ	< 0.110 UJ	< 0.290 UJ		**1.28** J	< 0.100 UJ	< 0.110 UJ	< 0.100 UJ	< 0.140 UJ	< 0.0600 UJ	**0.23** J	< 0.180 UJ	< 0.110 UJ	< 0.0900 UJ	< 0.0900 UJ	< 0.0900 UJ	< 0.0700 UJ	**2.82** J	< 0.0700 UJ
RP-10-60	Intermediate	RP-10-60-081209	08/12/2009	< 3.62 UJ	< 0.0800 UJ	< 0.110 UJ	< 0.290 UJ		< 0.0900 UJ	< 0.100 UJ	< 0.110 UJ	< 0.100 UJ	< 0.140 UJ	< 0.0600 UJ	< 0.0500 UJ	< 0.180 UJ	< 0.110 UJ	< 0.0900 UJ	< 0.0900 UJ	< 0.0900 UJ	< 0.0700 UJ	< 0.0600 UJ	< 0.0700 UJ
RP-10-97	Gravel	RP-10-97-081209	08/12/2009	< 3.62 UJ	< 0.0800 UJ	< 0.110 UJ	< 0.290 UJ		< 0.0900 UJ	< 0.100 UJ	< 0.110 UJ	< 0.100 UJ	< 0.140 UJ	< 0.0600 UJ	< 0.0500 UJ	< 0.180 UJ	< 0.110 UJ	< 0.0900 UJ	< 0.0900 UJ	< 0.0900 UJ	< 0.0700 UJ	< 0.0600 UJ	< 0.0700 UJ
RP-10-130	Basalt	RP-10-130-081209	08/12/2009	< 3.62 UJ	< 0.0800 UJ	< 0.110 UJ	< 0.290 UJ		< 0.0900 UJ	< 0.100 UJ	< 0.110 UJ	< 0.100 UJ	< 0.140 UJ	< 0.0600 UJ	< 0.0500 UJ	< 0.180 UJ	< 0.110 UJ	< 0.0900 UJ	< 0.0900 UJ	< 0.0900 UJ	< 0.0700 UJ	< 0.0600 UJ	< 0.0700 UJ
RP-13-11	Intermediate	RP-13-11-081809	08/18/2009	< 3.62 U	< 0.0800 U	< 0.110 U	< 0.290 U	< 7.76 U	< 0.0900 U	< 0.100 U	< 0.110 U	< 0.100 U	< 0.140 U	< 0.0600 U	< 0.0500 U	< 0.180 U	< 0.110 U	< 0.0900 U	< 0.0900 U	< 0.0900 U	< 0.0700 U	< 0.0600 U	< 0.0700 U
RP-13-22	Intermediate	RP-13-22-081809	08/18/2009	< 3.62 U	< 0.0800 U	< 0.110 U	< 0.290 U	< 7.76 U	< 0.0900 U	< 0.100 U	< 0.110 U	< 0.100 U	< 0.140 U	< 0.0600 U	< 0.0500 U	< 0.180 U	< 0.110 U	< 0.0900 U	< 0.0900 U	< 0.0900 U	< 0.0700 U	< 0.0600 U	< 0.0700 U
RP-13-33	Gravel	RP-13-33-081809	08/18/2009	< 18.1 U	< 0.400 U	< 0.550 U	< 1.45 U		< 0.450 U	< 0.500 U	< 0.550 U	< 0.500 U	< 0.700 U	< 0.300 U	< 0.250 U	< 0.900 UJ	< 0.550 U	< 0.450 U	< 0.450 U	< 0.450 U	< 0.350 U	< 0.300 U	< 0.350 U
RP-13-43	Basalt	RP-13-43-081809	08/18/2009	< 36.2 U	< 0.800 U	< 1.10 U	< 2.90 U		**1.1** J	< 1.00 U	< 1.10 U	< 1.00 U	< 1.40 U	< 0.600 U	**129**	< 1.80 UJ	< 1.10 U	< 0.900 U	**4.8** J	< 0.900 U	< 0.700 U	< 0.600 U	< 0.700 U
RP-14-26	Intermediate	RP-14-26-081809	08/18/2009	< 20 UT	< 2.00 UT	< 2.00 UT	< 10.0 UT		< 1 UT	< 1.00 UT	< 1 UT	< 1 UT	< 2 UT	< 1.00 UT	< 1.00 UT	< 1 UJT	< 1 UT	**32.7** T	**0.18** JT	< 1.00 UT	< 4 UT	< 4 UT	< 1.00 UT
RP-14-39	Gravel	RP-14-39-081809	08/18/2009	< 7.24 U	< 0.160 U	< 0.220 U	< 0.580 U		< 0.180 U	< 0.200 U	< 0.220 U	< 0.200 U	< 0.280 U	< 0.120 U	< 0.100 U	< 0.360 UJ	< 0.220 U	**3.56**	< 0.180 U	< 0.180 U	< 0.140 U	< 0.120 U	< 0.140 U
W-19-D	Basalt	W-19-D-081409	08/14/2009	< 100 UT	< 10.0 UT	< 10.0 UT	< 50.0 UT	< 200 UT	**1.35** JT	< 5.00 UT	< 5 UT	< 5 UT	< 10 UT	< 5 UT	**164** T	< 5 UT	< 5 UT	< 5 UT	**5.5** JT	< 5.00 UT	< 20 UT	< 20 UT	< 5.00 UT
W-19-I	Deep	W-19-I-081409	08/14/2009	< 3.62 U	< 0.0800 U	< 0.110 U	< 0.290 U	< 7.76 U	< 0.0900 U	< 0.100 U	< 0.110 U	< 0.100 U	< 0.140 U	< 0.0600 U	**0.08** J	< 0.180 U	< 0.110 U	< 0.0900 U	< 0.0900 U	< 0.0900 U	< 0.0700 U	< 0.0600 U	< 0.0700 U

Table 2
Volatile Organic Compounds Results
August 2009 Sitewide Groundwater Monitoring
Arkema, Inc. Facility
Portland, Oregon

Wells	Aquifer	Sample ID	Sample Date	Dibromomethane ug/l	Ethyl benzene ug/l	Ethylene dibromide (1,2-Dibromoethane) ug/l	Ethylene dichloride (1,2-Dichloroethane) ug/l	Freon 11 (Trichloro-fluoromethane) ug/l	Freon 12 (Dichloro-difluoromethane) ug/l	Hexachlorobutadiene ug/l	m,p Xylenes ug/l	Methyl bromide (Bromomethane) ug/l	Methyl chloride ug/l	Methyl tert butyl ether ug/l	Methylene chloride ug/l	Naphthalene ug/l	n-Butylbenzene ug/l	n-Propylbenzene ug/l	o-Chlorotoluene (2-Chlorotoluene) ug/l	1,2-Dichlorobenzene ug/l
MWA-2	Shallow	MWA-2-080609	08/06/2009	< 50.0 U	< 30.0 U	< 55.0 U	< 50.0 U	< 30.0 U	< 55.0 U	< 105 U	< 105 U	< 85.0 U	< 40.0 U	< 45.0 U	< 80.0 U	< 45.0 U	< 30.0 U	< 50.0 U	< 35.0 U	< 35.0 U
MWA-3	Shallow	MWA-3-081009	08/10/2009	< 0.100 UJ	< 0.0600 UJ	< 0.110 UJ	< 0.100 UJ	< 0.0600 UJ	< 0.110 UJ	< 0.210 UJ	< 0.210 UJ	< 0.170 UJ	< 0.0800 UJ	< 0.0900 UJ	< 0.160 U	< 0.0900 UJ	< 0.0600 UJ	< 0.100 UJ	< 0.0700 UJ	< 0.0700 UJ
MWA-4	Shallow	MWA-4-081109	08/11/2009	< 0.200 U	< 0.120 U	< 0.220 U	< 0.200 U	< 0.120 U	< 0.220 U	< 0.420 U	< 0.420 U	< 0.340 UJ	< 0.160 U	< 0.180 U	< 0.320 U	< 0.180 U	< 0.120 U	< 0.200 U	< 0.140 U	< 0.140 U
MWA-5	Shallow	MWA-5-080509	08/05/2009	< 0.200 U	< 0.120 U	< 0.220 U	< 0.200 U	< 0.120 U	< 0.220 U	< 0.420 U	< 0.420 U	< 0.340 U	< 0.160 U	< 0.180 U	< 0.320 U	< 0.180 U	< 0.120 U	< 0.200 U	< 0.140 U	< 0.140 U
MWA-6R	Shallow	MWA-6R-081109	08/11/2009	< 2.00 U	< 1.20 U	< 2.20 U	< 2.00 U	< 1.20 U	< 2.20 U	< 4.20 U	< 4.20 U	< 3.40 U	< 1.60 U	**2** J	**7.8** J	< 1.80 U	< 1.20 U	< 2.00 U	< 1.40 U	< 1.40 U
MWA-7(I)	Intermediate	MWA-7(I)-081409	08/14/2009	< 0.500 U	< 0.300 U	< 0.550 U	< 0.500 U	< 0.300 U	< 0.550 U	< 1.05 U	< 1.05 U	< 0.850 U	< 0.400 U	< 0.450 U	< 0.800 U	< 0.450 U	< 0.300 U	< 0.500 U	< 0.350 U	< 0.350 U
MWA-8I	Intermediate	MWA-8I-080609	08/06/2009	< 2.00 U	< 1.20 U	< 2.20 U	< 2.00 U	< 1.20 U	< 2.20 U	< 4.20 U	< 4.20 U	< 3.40 U	< 1.60 U	< 1.80 U	< 3.20 U	< 1.80 U	< 1.20 U	< 2.00 U	< 1.40 U	< 1.40 U
MWA-9I	Intermediate	MWA-9I-081109	08/11/2009	< 100 U	< 60.0 U	< 110 U	< 100 U	< 60.0 U	< 110 U	< 210 U	< 210 U	< 170 U	< 80.0 U	< 90.0 U	< 160 U	< 90.0 U	< 60.0 U	< 100 U	< 70.0 U	**80** J
MWA-10I	Intermediate	MWA-10I-081109	08/11/2009	< 10.0 U	< 6.00 U	< 11.0 U	< 10.0 U	< 6.00 U	< 11.0 U	< 21.0 U	< 21.0 U	< 17.0 UJ	< 8.00 U	< 9.00 U	< 16.0 U	< 9.00 U	< 6.00 U	< 10.0 U	< 7.00 U	< 7.00 U
MWA-11I(D)	Deep	MWA-11I-081909	08/19/2009	< 0.100 U	< 0.0600 U	< 0.110 U	< 0.100 U	< 0.0600 U	< 0.110 UJ	< 0.210 U	< 0.210 U	< 0.170 UJ	< 0.0800 U	< 0.0900 U	< 0.160 U	< 0.0900 U	< 0.0600 U	< 0.100 U	< 0.0700 U	< 0.0700 U
MWA-12I(D)	Deep	MWA-12I(D)-081409	08/14/2009	< 0.100 U	< 0.0600 U	< 0.110 U	< 0.100 U	< 0.0600 U	< 0.110 U	< 0.210 U	< 0.210 U	< 0.170 U	< 0.0800 U	< 0.0900 U	< 0.160 U	< 0.0900 U	< 0.0600 U	< 0.100 U	< 0.0700 U	< 0.0700 U
MWA-13D	Deep	MWA-13D-081009	08/10/2009	< 1.00 UJ	< 0.600 UJ	< 1.10 UJ	< 1.00 UJ	< 0.600 UJ	< 1.10 UJ	< 2.10 UJ	< 2.10 UJ	< 1.70 UJ	< 0.800 UJ	< 0.900 UJ	< 1.60 U	< 0.900 UJ	< 0.600 UJ	< 1.00 UJ	< 0.700 UJ	< 0.700 UJ
MWA-14I(D)	Deep	MWA-14I(D)-080509	08/05/2009	< 0.200 U	< 0.120 U	< 0.220 U	< 0.200 U	< 0.120 U	< 0.220 U	< 0.420 U	< 0.420 U	< 0.340 U	< 0.160 U	< 0.180 U	< 0.320 U	< 0.180 U	< 0.120 U	< 0.200 U	< 0.140 U	< 0.140 U
MWA-15R	Shallow	MWA-15R-081909	08/19/2009	< 20.0 U	< 12.0 U	< 22.0 U	< 20.0 U	< 12.0 U	< 22.0 UJ	< 42.0 U	< 42.0 U	< 34.0 UJ	< 16.0 U	**48** J	**170** J	< 18.0 U	< 12.0 U	< 20.0 U	< 14.0 U	< 14.0 U
MWA-16I	Intermediate	MWA-16I-081109	08/11/2009	< 0.200 U	< 0.120 U	< 0.220 U	< 0.200 U	< 0.120 U	< 0.220 U	< 0.420 U	< 0.420 U	< 0.340 UJ	< 0.160 U	< 0.180 U	< 0.320 U	< 0.180 U	< 0.120 U	< 0.200 U	< 0.140 U	< 0.140 U
MWA-17SI	Shallow	MWA-17SI-081009	08/10/2009	< 10.0 UJ	< 6.00 UJ	< 11.0 UJ	< 10.0 UJ	< 6.00 UJ	< 11.0 UJ	< 21.0 UJ	< 21.0 UJ	< 17.0 UJ	< 8.00 UJ	< 9.00 UJ	< 16.0 U	< 9.00 UJ	< 6.00 UJ	< 10.0 UJ	< 7.00 UJ	< 7.00 UJ
MWA-18	Shallow	MWA-18-081009	08/10/2009	< 0.100 UJ	< 0.0600 UJ	< 0.110 UJ	< 0.100 UJ	< 0.0600 UJ	< 0.110 UJ	< 0.210 UJ	< 0.210 UJ	< 0.170 UJ	< 0.0800 UJ	< 0.0900 UJ	< 0.160 UJ	< 0.0900 UJ	< 0.0600 UJ	< 0.100 UJ	< 0.0700 UJ	< 0.0700 UJ
MWA-19	Shallow	MWA-19-081009	08/10/2009	< 0.100 U	< 0.0600 U	< 0.110 U	< 0.100 U	< 0.0600 U	< 0.110 U	< 0.210 U	< 0.210 U	< 0.170 UJ	< 0.0800 U	< 0.0900 U	< 0.160 U	< 0.0900 U	< 0.0600 U	< 0.100 U	< 0.0700 U	< 0.0700 U
MWA-20	Shallow	MWA-20-081709	08/17/2009	< 2.00 U	< 1.20 U	< 2.20 U	< 2.00 U	< 1.20 U	< 2.20 U	< 4.20 U	< 4.20 U	< 3.40 U	< 1.60 U	< 1.80 U	< 3.20 U	< 1.80 U	< 1.20 U	< 2.00 U	< 1.40 U	< 1.40 U
MWA-22	Shallow	MWA-22-081909	08/19/2009	< 0.500 U	< 0.300 U	< 0.550 U	< 0.500 U	< 0.300 U	< 0.550 UJ	< 1.05 U	< 1.05 U	< 0.850 UJ	< 0.400 U	**0.9**	**3.7**	**0.85**	< 0.300 U	< 0.500 U	< 0.350 U	< 0.350 U
MWA-24	Shallow	MWA-24-080509	08/05/2009	< 0.100 U	< 0.0600 U	< 0.110 U	< 0.100 U	< 0.0600 U	< 0.110 U	< 0.210 U	< 0.210 U	< 0.170 U	< 0.0800 U	< 0.0900 U	< 0.160 U	< 0.0900 U	< 0.0600 U	< 0.100 U	< 0.0700 U	< 0.0700 U
MWA-30	Shallow	MWA-30-081009	08/10/2009	< 0.400 UJ	< 0.240 UJ	< 0.440 UJ	< 0.400 UJ	< 0.240 UJ	< 0.440 UJ	< 0.840 UJ	< 0.840 UJ	< 0.680 UJ	< 0.320 UJ	< 0.360 UJ	< 0.640 UJ	< 0.360 UJ	< 0.240 UJ	< 0.400 UJ	< 0.280 UJ	< 0.280 UJ
MWA-31I(D)	Deep	MWA-31I(D)-081009	08/10/2009	< 1 UJT	< 1 UJT	< 1 UJT	< 1 UJT	< 1 UJT	< 1 UJT	< 4 UJT	< 2 UJT	< 4 UJT	< 4 UJT	< 2 UJT	< 0.4 UT	< 4 UJT	< 10 UJT	< 2 UJT	< 2 UJT	< 1 UJT
MWA-32I	Intermediate	MWA-32I-081009	08/10/2009	< 0.200 UJ	< 0.120 UJ	< 0.220 UJ	< 0.200 UJ	< 0.120 UJ	< 0.220 UJ	< 0.420 UJ	< 0.420 UJ	< 0.340 UJ	< 0.160 UJ	< 0.180 UJ	< 0.320 U	< 0.180 UJ	< 0.120 UJ	< 0.200 UJ	< 0.140 UJ	**0.18** J
MWA-34I	Intermediate	MWA-34I-081109	08/11/2009	< 25 UJT	< 25.0 UJT	< 25.0 UJT	< 25.0 UJT	< 25 UJT	< 25 UJT	< 100 UJT	< 50.0 UJT	< 100 UJT	< 100 UJT	**4.5** JT	< 17 UJT	< 100 UJT	< 250 UJT	< 50.0 UJT	< 50 UJT	< 25 UJT
MWA-42	Shallow	MWA-42-081709	08/17/2009	< 0.500 U	< 0.300 U	< 0.550 U	< 0.500 U	< 0.300 U	< 0.550 U	< 1.05 U	< 1.05 U	< 0.850 U	< 0.400 U	< 0.450 U	< 0.800 U	< 0.450 U	< 0.300 U	< 0.500 U	< 0.350 U	< 0.350 U
MWA-44	Shallow	MWA-44-081109	08/11/2009	< 0.200 U	< 0.120 U	< 0.220 U	< 0.200 U	< 0.120 U	< 0.220 U	< 0.420 U	< 0.420 U	< 0.340 UJ	< 0.160 U	< 0.180 U	< 0.320 U	< 0.180 U	< 0.120 U	< 0.200 U	< 0.140 U	< 0.140 U
MWA-45	Shallow	MWA-45-081709	08/17/2009	< 0.100 U	**0.08** J	< 0.110 U	< 0.100 U	< 0.0600 U	< 0.110 U	< 0.210 U	**0.34** J	< 0.170 U	< 0.0800 U	< 0.0900 U	< 0.160 U	< 0.0900 U	< 0.0600 U	< 0.100 U	< 0.0700 U	< 0.0700 U
MWA-46	Shallow	MWA-46-081009	08/10/2009	< 0.200 U	< 0.120 U	< 0.220 U	< 0.200 U	< 0.120 U	< 0.220 U	< 0.420 U	< 0.420 U	< 0.340 U	< 0.160 U	< 0.180 U	< 0.320 U	< 0.180 U	< 0.120 U	< 0.200 U	< 0.140 U	< 0.140 U
MWA-47	Shallow	MWA-47-080609	08/06/2009	< 0.200 U	< 0.120 U	< 0.220 U	< 0.200 U	< 0.120 U	< 0.220 U	< 0.420 U	< 0.420 U	< 0.340 U	< 0.160 U	< 0.180 U	< 0.320 U	< 0.180 U	< 0.120 U	< 0.200 U	< 0.140 U	**0.2** J
MWA-49I	Intermediate	MWA-49I-081009	08/10/2009	< 2.00 U	< 1.20 U	< 2.20 U	< 2.00 U	< 1.20 U	< 2.20 U	< 4.20 U	< 4.20 U	< 3.40 U	< 1.60 U	< 1.80 U	< 3.20 U	< 1.80 U	< 1.20 U	< 2.00 U	< 1.40 U	< 1.40 U
MWA-50I	Intermediate	MWA-50I-080609	08/06/2009	< 0.200 U	**0.16** J	< 0.220 U	< 0.200 U	< 0.120 U	< 0.220 U	< 0.420 U	**0.76** J	< 0.340 U	< 0.160 U	< 0.180 U	< 0.320 U	< 0.180 U	< 0.120 U	< 0.200 U	< 0.140 U	< 0.140 U
MWA-51I	Intermediate	MWA-51I-081009	08/10/2009	< 0.500 UJ	< 0.300 UJ	< 0.550 UJ	< 0.500 UJ	< 0.300 UJ	< 0.550 UJ	< 1.05 UJ	< 1.05 UJ	< 0.850 UJ	< 0.400 UJ	< 0.450 UJ	< 0.800 UJ	< 0.450 UJ	< 0.300 UJ	< 0.500 UJ	< 0.350 UJ	< 0.350 UJ
MWA-54I	Intermediate	MWA-54I-081909	08/19/2009	< 0.500 U	< 0.300 U	< 0.550 U	< 0.500 U	< 0.300 U	< 0.550 UJ	< 1.05 U	< 1.05 U	< 0.850 U	< 0.400 U	**0.8** J	**2.1** J	< 0.450 U	< 0.300 U	< 0.500 U	< 0.350 U	< 0.350 U
MWA-55I	Intermediate	MWA-55I-081709	08/17/2009	< 0.500 U	< 0.300 U	< 0.550 U	< 0.500 U	< 0.300 U	< 0.550 U	< 1.05 U	< 1.05 U	< 0.850 U	< 0.400 U	< 0.450 U	< 0.800 U	< 0.450 U	< 0.300 U	< 0.500 U	< 0.350 U	< 0.350 U
MWA-56D	Deep	MWA-56D-081009	08/10/2009	< 1.00 U	< 0.600 U	< 1.10 U	< 1.00 U	< 0.600 U	< 1.10 U	< 2.10 U	< 2.10 U	< 1.70 U	< 0.800 U	< 0.900 U	< 1.60 U	< 0.900 U	< 0.600 U	< 1.00 U	< 0.700 U	< 0.700 U
MWA-57D	Deep	MWA-57D-081709	08/17/2009	< 0.500 U	< 0.300 U	< 0.550 U	< 0.500 U	< 0.300 U	< 0.550 U	< 1.05 U	< 1.05 U	< 0.850 U	< 0.400 U	< 0.450 U	< 0.800 U	< 0.450 U	< 0.300 U	< 0.500 U	< 0.350 U	< 0.350 U
MWA-58D	Deep	MWA-58D-081009	08/10/2009	< 2.00 U	< 1.20 U	< 2.20 U	< 2.00 U	< 1.20 U	< 2.20 U	< 4.20 U	< 4.20 U	< 3.40 UJ	< 1.60 U	< 1.80 U	< 3.20 U	< 1.80 U	< 1.20 U	< 2.00 U	< 1.40 U	< 1.40 U
MWA-59D	Deep	MWA-59D-080609	08/06/2009	< 0.100 U	< 0.0600 U	< 0.110 U	< 0.100 U	< 0.0600 U	< 0.110 U	< 0.210 U	< 0.210 U	< 0.170 U	< 0.0800 U	< 0.0900 U	< 0.160 U	**0.12** J	< 0.0600 U	< 0.100 U	< 0.0700 U	< 0.0700 U
MWA-60	Shallow	MWA-60-080509	08/05/2009	< 0.500 U	< 0.300 U	< 0.550 U	< 0.500 U	< 0.300 U	< 0.550 U	< 1.05 U	< 1.05 U	< 0.850 UJ	< 0.400 U	< 0.450 U	< 0.800 U	< 0.450 U	< 0.300 U	< 0.500 U	< 0.350 U	< 0.350 U
MWA-61	Shallow	MWA-61-081009	08/10/2009	< 2.00 UJ	< 1.20 UJ	< 2.20 UJ	< 2.00 UJ	< 1.20 UJ	< 2.20 UJ	< 4.20 UJ	< 4.20 UJ	< 3.40 UJ	< 1.60 UJ	**2.8** J	< 3.20 U	< 1.80 UJ	< 1.20 UJ	< 2.00 UJ	< 1.40 UJ	< 1.40 UJ
MWA-62	Shallow	MWA-62-081709	08/17/2009	< 0.100 U	< 0.0600 U	< 0.110 U	< 0.100 U	< 0.0600 U	< 0.110 U	< 0.210 U	< 0.210 U	< 0.170 U	< 0.0800 U	< 0.0900 U	< 0.160 U	< 0.0900 U	< 0.0600 U	< 0.100 U	< 0.0700 U	< 0.0700 U
MWA-63	Shallow	MWA-63-080509	08/05/2009	< 20.0 U	< 12.0 U	< 22.0 U	< 20.0 U	< 12.0 U	< 22.0 U	< 42.0 U	< 42.0 U	< 34.0 U	< 16.0 U	< 18.0 U	< 32.0 U	< 18.0 U	< 12.0 U	< 20.0 U	< 14.0 U	< 14.0 U
MWA-64I	Intermediate	MWA-64I-080609	08/06/2009	< 5.00 U	< 3.00 U	< 5.50 U	< 5.00 U	< 3.00 U	< 5.50 U	< 10.5 U	< 10.5 U	< 8.50 U	< 4.00 U	< 4.50 U	< 8.00 U	< 4.50 U	< 3.00 U	< 5.00 U	< 3.50 U	< 3.50 U
MWA-65I	Intermediate	MWA-65I-081709	08/17/2009	< 5.00 U	< 3.00 U	< 5.50 U	< 5.00 U	< 3.00 U	< 5.50 U	< 10.5 U	< 10.5 U	< 8.50 U	< 4.00 U	< 4.50 U	< 8.00 U	< 4.50 U	< 3.00 U	< 5.00 U	< 3.50 U	< 3.50 U
MWA-66I	Intermediate	MWA-66I-081109	08/11/2009	< 10.0 U	< 6.00 U	< 11.0 U	< 10.0 U	< 6.00 U	< 11.0 U	< 21.0 U	< 21.0 U	< 17.0 UJ	< 8.00 U	< 9.00 U	< 16.0 U	< 9.00 U	< 6.00 U	< 10.0 U	< 7.00 U	< 7.00 U
MWA-67SI	Shallow	MWA-67SI-080609	08/06/2009	< 100 U	< 60.0 U	< 110 U	< 100 U	< 60.0 U	< 110 U	< 210 U	< 210 U	< 170 U	< 80.0 U	< 90.0 U	< 160 U	< 90.0 U	< 60.0 U	< 100 U	< 70.0 U	< 70.0 U
MWA-68SI	Shallow	MWA-68SI-081109	08/11/2009	< 10.0 U	< 6.00 U	< 11.0 U	< 10.0 U	< 6.00 U	< 11.0 U	< 21.0 U	< 21.0 U	< 17.0 UJ	**98** J	< 9.00 U	< 16.0 U	< 9.00 U	< 6.00 U	< 10.0 U	< 7.00 U	**10** J
MWA-69	Shallow	MWA-69-081109	08/11/2009	< 10.0 U	< 6.00 U	< 11.0 U	< 10.0 U	< 6.00 U	< 11.0 U	< 21.0 U	< 21.0 U	< 17.0 UJ	< 8.00 U	< 9.00 U	< 16.0 U	< 9.00 U	< 6.00 U	< 10.0 U	< 7.00 U	**12** J
MWA-71	Shallow	MWA-71-080709	08/07/2009	< 0.200 U	< 0.120 U	< 0.220 U	< 0.200 U	< 0.120 U	< 0.220 U	< 0.420 U	< 0.420 U	< 0.340 U	< 0.160 U	< 0.180 U	< 0.320 U	< 0.180 U	< 0.120 U	< 0.200 U	< 0.140 U	< 0.140 U
MWA-72	Shallow	MWA-72-081709	08/17/2009	< 0.100 U	**0.26** J	< 0.110 U	< 0.100 U	< 0.0600 U	< 0.110 U	< 0.210 U	**1.06**	< 0.170 U	< 0.0800 U	< 0.0900 U	< 0.160 U	< 0.0900 U	< 0.0600 U	< 0.100 U	< 0.0700 U	**0.87**
MWA-73	Shallow	MWA-73-081409	08/14/2009	< 0.100 U	< 0.0600 U	< 0.110 U	< 0.100 U	< 0.0600 U	< 0.110 U	< 0.210 U	< 0.210 U	< 0.170 U	< 0.0800 U	< 0.0900 U	< 0.160 U	< 0.0900 U	< 0.0600 U	< 0.100 U	< 0.0700 U	**0.37** J
MWA-74I	Intermediate	MWA-74I-080709	08/07/2009	< 0.100 U	< 0.0600 U	< 0.110 U	< 0.100 U	< 0.0600 U	< 0.110 U	< 0.210 U	< 0.210 U	< 0.170 U	< 0.0800 U	< 0.0900 U	< 0.160 U	< 0.0900 U	< 0.0600 U	< 0.100 U	< 0.0700 U	**0.89**
MWA-75I	Intermediate	MWA-75I-1-081409	08/14/2009	< 0.100 U	< 0.0600 U	< 0.110 U	< 0.100 U	< 0.0600 U	< 0.110 U	< 0.210 U	< 0.210 U	< 0.170 U	< 0.0800 U	< 0.0900 U	< 0.160 U	< 0.0900 U	< 0.0600 U	< 0.100 U	< 0.0700 U	**1.99**
MWA-75I	Intermediate	MWA-75I-2-081409	08/14/2009	< 0.100 U	< 0.0600 U	< 0.110 U	< 0.100 U	< 0.0600 U	< 0.110 U	< 0.210 U	< 0.210 U	< 0.170 U	< 0.0800 U	< 0.0900 U	< 0.160 U	< 0.0900 U	< 0.0600 U	< 0.100 U	< 0.0700 U	**2.44**
MWA-76G	Gravel	MWA-76G-080709	08/07/2009	< 0.100 U	< 0.0600 U	< 0.110 U	< 0.100 U	< 0.0600 U	< 0.110 U	< 0.210 U	< 0.210 U	< 0.170 U	< 0.0800 U	< 0.0900 U	< 0.160 U	< 0.0900 U	< 0.0600 U	< 0.100 U	< 0.0700 U	< 0.0700 U
MWA-77G	Gravel	MWA-77G-081709	08/17/2009	< 0.100 U	**0.13** J	< 0.110 U	< 0.100 U	< 0.0600 U	< 0.110 U	< 0.210 U	**0.46** J	< 0.170 U	< 0.0800 U	< 0.0900 U	< 0.160 U	**0.09** J	< 0.0600 U	< 0.100 U	< 0.0700 U	< 0.0700 U
NMP-3D	Shallow	NMP-3D-081909	08/19/2009	< 25 UT	< 25.0 UT	< 25.0 UT	< 25.0 UT	< 25 UT	< 25 UJT	< 100 UT	< 50.0 UT	< 100 UJT	< 100 UT	**10** JT	**36** JT	< 100 UT	< 250 UT	< 50.0 UT	< 50 UT	**7** JT
NMP-4D	Shallow	NMP-4D-081909	08/19/2009	< 100 U	< 60.0 U	< 110 U	< 100 U	< 60.0 U	< 110 UJ	< 210 U	< 210 U	< 170 UJ	< 80.0 U	**230** J	**920** J	< 90.0 U	< 60.0 U	< 100 U	< 70.0 U	< 70.0 U
PMP-4	Shallow	PMP-4-081109	08/11/2009	< 2.00 U	< 1.20 U	< 2.20 U	< 2.00 U	< 1.20 U	< 2.20 U	< 4.20 U	< 4.20 U	< 3.40 UJ	< 1.60 U	< 1.80 U	< 3.20 U	< 1.80 U	< 1.20 U	< 2.00 U	< 1.40 U	< 1.40 U
PMP-6	Shallow	PMP-6-081109	08/11/2009	< 2.00 U	< 1.20 U	< 2.20 U	< 2.00 U	< 1.20 U	< 2.20 U	< 4.20 U	< 4.20 U	< 3.40 UJ	< 1.60 U	< 1.80 U	< 3.20 U	< 1.80 U	< 1.20 U	< 2.00 U	< 1.40 U	< 1.40 U
PMP-5	Shallow	PMP-5-081109	08/11/2009	< 2.00 U	< 1.20 U	< 2.20 U	< 2.00 U	< 1.20 U	< 2.20 U	< 4.20 U	< 4.20 U	< 3.40 UJ	< 1.60 U	< 1.80 U	< 3.20 U	< 1.80 U	< 1.20 U	< 2.00 U	< 1.40 U	< 1.40 U
RP-02-49	Intermediate	RP-02-49-081309	08/13/2009	< 0.500 U	< 0.300 U	< 0.550 U	< 0.500 U	< 0.300 U	< 0.550 U	< 1.05 U	< 1.05 U	< 0.850 UJ	< 0.400 U	**0.7** J	< 0.800 U	< 0.450 UJ	< 0.300 U	< 0.500 U	< 0.350 U	**114**
RP-02-66	Basalt	RP-02-66-081309	08/13/2009	< 0.500 U	< 0.300 U	< 0.550 U	< 0.500 U	< 0.300 U	< 0.550 U	< 1.05 U	< 1.05 U	< 0.850 U	< 0.400 U	< 0.450 U	< 0.800 U	< 0.450 U	< 0.300 U	< 0.500 U	< 0.350 U	**133**
RP-08-23	Shallow	RP-08-23-081309	08/13/2009	< 0.200 U	< 0.120 U	< 0.220 U	< 0.200 U	< 0.120 U	< 0.220 U	< 0.420 U	< 0.420 U	< 0.340 UJ	< 0.160 U	< 0.180 U	< 0.320 U	< 0.180 UJ	< 0.120 U	< 0.200 U	< 0.140 U	**0.22** J
RP-08-80	Intermediate	RP-08-80-081309	08/13/2009	< 2.00 U	< 1.20 U	< 2.20 U	< 2.00 U	< 1.20 U	< 2.20 U	< 4.20 U	< 4.20 U	< 3.40 UJ	< 1.60 U	**2** J	< 3.20 U	< 1.80 UJ	< 1.20 U	< 2.00 U	< 1.40 U	**392**
RP-08-107	Basalt	RP-08-107-081309	08/13/2009	< 2.00 U	< 1.20 U	< 2.20 U	< 2.00 U	< 1.20 U	< 2.20 U	< 4.20 U	< 4.20 U	< 3.40 UJ	< 1.60 U	**2.4** J	< 3.20 U	< 1.80 UJ	< 1.20 U	< 2.00 U	< 1.40 U	**701**
RP-09-35	Shallow	RP-09-35-081209	08/12/2009	< 0.200 U	< 0.120 U	< 0.220 U	< 0.200 U	< 0.120 U	< 0.220 U	< 0.420 U	< 0.420 U	< 0.340 UJ	< 0.160 U	< 0.180 U	< 0.320 U	< 0.180 UJ	< 0.120 U	< 0.200 U	< 0.140 U	< 0.140 U
RP-09-47	Intermediate	RP-09-47-081209	08/12/2009	< 0.100 U	< 0.0600 U	< 0.110 U	< 0.100 U	< 0.0600 U	< 0.110 U	< 0.210 U	< 0.210 U	< 0.170 UJ	< 0.0800 U	< 0.0900 U	< 0.160 U	< 0.0900 UJ	< 0.0600 U	< 0.100 U	< 0.0700 U	< 0.0700 U
RP-09-64	Basalt	RP-09-64-081209	08/12/2009	< 0.100 U	< 0.0600 U	< 0.110 U	< 0.100 U	< 0.0600 U	< 0.110 U	< 0.210 U	< 0.210 U	< 0.170 UJ	< 0.0800 U	< 0.0900 U	< 0.160 U	< 0.0900 UJ	< 0.0600 U	< 0.100 U	< 0.0700 U	**0.09** J
RP-10-30	Shallow	RP-10-30-081209	08/12/2009	< 0.100 UJ	< 0.0600 UJ	< 0.110 UJ	< 0.100 UJ	< 0.0600 UJ	< 0.110 UJ	< 0.210 UJ	< 0.210 UJ	< 0.170 UJ	< 0.0800 UJ	< 0.0900 UJ	< 0.160 UJ	< 0.0900 UJ	< 0.0600 UJ	< 0.100 UJ	< 0.0700 UJ	**0.32** J
RP-10-60	Intermediate	RP-10-60-081209	08/12/2009	< 0.100 UJ	**0.08** J	< 0.110 UJ	< 0.100 UJ	< 0.0600 UJ	< 0.110 UJ	< 0.210 UJ	< 0.210 UJ	< 0.170 UJ	< 0.0800 UJ	< 0.0900 UJ	< 0.160 UJ	< 0.0900 UJ	< 0.0600 UJ	< 0.100 UJ	< 0.0700 UJ	< 0.0700 UJ
RP-10-97	Gravel	RP-10-97-081209	08/12/2009	< 0.100 UJ	< 0.0600 UJ	< 0.110 UJ	< 0.100 UJ	< 0.0600 UJ	< 0.110 UJ	< 0.210 UJ	< 0.210 UJ	< 0.170 UJ	< 0.0800 UJ	< 0.0900 UJ	< 0.160 UJ	< 0.0900 UJ	< 0.0600 UJ	< 0.100 UJ	< 0.0700 UJ	< 0.0700 UJ
RP-10-130	Basalt	RP-10-130-081209	08/12/2009	< 0.100 UJ	< 0.0600 UJ	< 0.110 UJ	< 0.100 UJ	< 0.0600 UJ	< 0.110 UJ	< 0.210 UJ	< 0.210 UJ	< 0.170 UJ	< 0.0800 UJ	< 0.0900 UJ	< 0.160 UJ	< 0.0900 UJ	< 0.0600 UJ	< 0.100 UJ	< 0.0700 UJ	< 0.0700 UJ
RP-13-11	Intermediate	RP-13-11-081809	08/18/2009	< 0.100 U	< 0.0600 U	< 0.110 U	< 0.100 U	< 0.0600 U	< 0.110 U	< 0.210 U	< 0.210 U	< 0.170 U	< 0.0800 U	< 0.0900 U	< 0.160 U	< 0.0900 U	< 0.0600 U	< 0.100 U	< 0.0700 U	< 0.0700 U
RP-13-22	Intermediate	RP-13-22-081809	08/18/2009	< 0.100 U	< 0.0600 U	< 0.110 U	< 0.100 U	< 0.0600 U	< 0.110 U	< 0.210 U	< 0.210 U	< 0.170 U	< 0.0800 U	< 0.0900 U	< 0.160 U	< 0.0900 U	< 0.0600 U	< 0.100 U	< 0.0700 U	< 0.0700 U
RP-13-33	Gravel	RP-13-33-081809	08/18/2009	< 0.500 U	< 0.300 U	< 0.550 U	< 0.500 U	< 0.300 U	< 0.550 UJ	< 1.05 U	< 1.05 U	< 0.850 UJ	< 0.400 U	**0.7** J	< 0.800 U	< 0.450 U	< 0.300 U	< 0.500 U	< 0.350 U	**6.65**
RP-13-43	Basalt	RP-13-43-081809	08/18/2009	< 1.00 U	< 0.600 U	< 1.10 U	< 1.00 U	< 0.600 U	< 1.10 UJ	**3.9** J	< 2.10 U	< 1.70 UJ	< 0.800 U	< 0.900 U	< 1.60 U	< 0.900 U	< 0.600 U	< 1.00 U	< 0.700 U	**372**
RP-14-26	Intermediate	RP-14-26-081809	08/18/2009	< 1 UT	< 1.00 UT	< 1.00 UT	< 1.00 UT	< 1 UT	< 1 UJT	< 4 UT	< 2.00 UT	< 4 UJT	< 4 UT	**0.23** JT	< 0.52 UT	< 0.180 U	< 10.0 UT	< 2.00 UT	< 2 UT	< 1 UT
RP-14-39	Gravel	RP-14-39-081809	08/18/2009	< 0.200 U	< 0.120 U	< 0.220 U	< 0.200 U	< 0.120 U	< 0.220 UJ	< 0.420 U	< 0.420 U	< 0.340 UJ	< 0.160 U	< 0.180 U	< 0.320 U	< 0.180 U	< 0.120 U	< 0.200 U	< 0.140 U	< 0.140 U
W-19-D	Basalt	W-19-D-081409	08/14/2009	< 5 UT	< 5.00 UT	< 5.00 UT	< 5.00 UT	< 5 UT	< 5 UT	< 20 UT	< 10.0 UT	< 20 UT	< 20 UT	< 10.0 UT	< 3.8 UT	< 0.900 U	< 50.0 UT	< 10.0 UT	< 10 UT	**298** T
W-19-I	Deep	W-19-I-081409	08/14/2009	< 0.100 U	< 0.0600 U	< 0.110 U	< 0.100 U	< 0.0600 U	< 0.110 U	< 0.210 U	< 0.210 U	< 0.170 U	< 0.0800 U	< 0.0900 U	< 0.160 U	< 0.0900 U	< 0.0600 U	< 0.100 U	< 0.0700 U	**0.16** J

Table 2
Volatile Organic Compounds Results
August 2009 Sitewide Groundwater Monitoring
Arkema, Inc. Facility
Portland, Oregon

Wells	Aquifer	Sample ID	Sample Date	o-Xylene ug/l		p-Dichlorobenzene (1,4-Dichlorobenzene) ug/l		Styrene ug/l		Tert-Butylbenzene ug/l		Tetrachloroethene ug/l		Toluene ug/l		Trans-1,2-Dichloroethene ug/l		Trans-1,3-Dichloropropene ug/l		Trichloroethene ug/l		Vinyl chloride ug/l		CVOCs	
MWA-2	Shallow	MWA-2-080609	08/06/2009	< 35.0	U	< 60.0	U	< 20.0	U	< 30.0	U	< 55.0	U	< 55.0	U	< 50.0	U	< 50.0	U	< 40.0	U	< 50.0	U	0	UT
MWA-3	Shallow	MWA-3-081009	08/10/2009	< 0.0700	UJ	< 0.120	UJ	< 0.0400	UJ	< 0.0600	UJ	**17**	J	< 0.110	U	< 0.100	UJ	< 0.100	UJ	**3.05**	J	< 0.100	UJ	**21.39**	
MWA-4	Shallow	MWA-4-081109	08/11/2009	< 0.140	U	**0.66**	J	< 0.0800	U	< 0.120	U	**1.38**		< 0.220	U	< 0.200	U	< 0.200	U	**2.38**		**0.36**	J	**9.2**	
MWA-5	Shallow	MWA-5-080509	08/05/2009	< 0.140	U	< 0.240	U	< 0.0800	U	< 0.120	U	< 0.220	U	< 0.220	U	< 0.200	U	< 0.200	U	< 0.160	U	< 0.200	U	0	UT
MWA-6R	Shallow	MWA-6R-081109	08/11/2009	< 1.40	U	< 2.40	U	< 0.800	U	< 1.20	U	**13.6**		< 2.20	U	**5.4**	J	< 2.00	U	**6.6**	J	< 2.00	U	**29.2**	
MWA-7(I)	Intermediate	MWA-7(I)-081409	08/14/2009	< 0.350	U	< 0.600	U	< 0.200	U	< 0.300	U	< 0.550	U	< 0.550	U	< 0.500	U	< 0.500	U	< 0.400	U	< 0.500	U	0	UT
MWA-8I	Intermediate	MWA-8I-080609	08/06/2009	< 1.40	U	< 2.40	U	< 0.800	U	< 1.20	U	< 2.20	U	< 2.20	U	< 2.00	U	< 2.00	U	< 1.60	U	< 2.00	U	0	UT
MWA-9I	Intermediate	MWA-9I-081109	08/11/2009	< 70.0	U	< 120	U	< 40.0	U	< 60.0	U	< 110	U	< 110	U	< 100	U	< 100	U	< 80.0	U	< 100	U	0	UT
MWA-10I	Intermediate	MWA-10I-081109	08/11/2009	< 7.00	U	< 12.0	U	< 4.00	U	< 6.00	U	< 11.0	U	< 11.0	U	< 10.0	U	< 10.0	U	< 8.00	U	< 10.0	U	0	UT
MWA-11I(D)	Deep	MWA-11I-081909	08/19/2009	< 0.0700	U	< 0.120	U	< 0.0400	U	< 0.0600	U	< 0.110	U	< 0.110	U	< 0.100	U	< 0.100	U	< 0.0800	U	< 0.100	U	0	UT
MWA-12I(D)	Deep	MWA-12I(D)-081409	08/14/2009	< 0.0700	U	< 0.120	U	< 0.0400	U	< 0.0600	U	< 0.110	U	< 0.110	U	< 0.100	U	< 0.100	U	< 0.0800	U	< 0.100	U	0	UT
MWA-13D	Deep	MWA-13D-081009	08/10/2009	< 0.700	UJ	< 1.20	UJ	< 0.400	UJ	< 0.600	UJ	< 1.10	UJ	< 1.10	UJ	< 1.00	UJ	< 1.00	UJ	< 0.800	UJ	< 1.00	UJ	0	UT
MWA-14I(D)	Deep	MWA-14I(D)-080509	08/05/2009	< 0.140	U	< 0.240	U	< 0.0800	U	< 0.120	U	< 0.220	U	< 0.220	U	< 0.200	U	< 0.200	U	< 0.160	U	< 0.200	U	0	UT
MWA-15R	Shallow	MWA-15R-081909	08/19/2009	< 14.0	U	< 24.0	U	< 8.00	U	< 12.0	U	**22**	J	< 22.0	U	< 20.0	U	< 20.0	U	< 16.0	U	< 20.0	U	**22**	
MWA-16I	Intermediate	MWA-16I-081109	08/11/2009	< 0.140	U	< 0.240	U	< 0.0800	U	< 0.120	U	< 0.220	U	< 0.220	U	**0.56**	J	< 0.200	U	< 0.160	U	< 0.200	U	**0.62**	
MWA-17SI	Shallow	MWA-17SI-081009	08/10/2009	< 7.00	UJ	**12**	J	< 4.00	UJ	< 6.00	UJ	**30**	J	< 11.0	UJ	< 10.0	UJ	< 10.0	UJ	< 8.00	UJ	< 10.0	UJ	**30**	
MWA-18	Shallow	MWA-18-081009	08/10/2009	< 0.0700	UJ	< 0.120	UJ	< 0.0400	UJ	< 0.0600	UJ	**0.82**	J	< 0.110	U	< 0.100	UJ	< 0.100	UJ	**0.29**	J	< 0.100	UJ	**2.09**	
MWA-19	Shallow	MWA-19-081009	08/10/2009	< 0.0700	U	< 0.120	U	< 0.0400	U	< 0.0600	U	**14.8**		< 0.110	U	< 0.100	U	< 0.100	U	**3.83**		< 0.100	U	**19.45**	
MWA-20	Shallow	MWA-20-081709	08/17/2009	< 1.40	U	< 2.40	U	< 0.800	U	< 1.20	U	< 2.20	U	< 2.20	U	< 2.00	U	< 2.00	U	< 1.60	U	< 2.00	U	0	UT
MWA-22	Shallow	MWA-22-081909	08/19/2009	< 0.350	U	< 0.600	U	< 0.200	U	< 0.300	U	< 0.550	U	< 0.550	U	< 0.500	U	< 0.500	U	< 0.400	U	**0.85**		**37.35**	
MWA-24	Shallow	MWA-24-080509	08/05/2009	< 0.0700	U	< 0.120	U	< 0.0400	U	< 0.0600	U	< 0.110	U	< 0.110	U	< 0.100	U	< 0.100	U	< 0.0800	U	< 0.100	U	0	UT
MWA-30	Shallow	MWA-30-081009	08/10/2009	< 0.280	UJ	< 0.480	UJ	< 0.160	UJ	< 0.240	UJ	< 0.440	UJ	< 0.440	UJ	< 0.400	UJ	< 0.400	UJ	< 0.320	UJ	< 0.400	UJ	0	UT
MWA-31I(D)	Deep	MWA-31I(D)-081009	08/10/2009	< 1	UJT	< 1	UJT	< 1	UJT	< 2	UJT	< 1	UJT	< 0.28	UJT	< 1	UJT	< 1	UJT	< 1	UJT	< 1	UJT	0	UT
MWA-32I	Intermediate	MWA-32I-081009	08/10/2009	< 0.140	UJ	< 0.240	UJ	< 0.0800	UJ	< 0.120	UJ	**0.62**	J	< 0.220	U	< 0.200	UJ	< 0.200	UJ	< 0.160	UJ	< 0.200	UJ	**0.62**	
MWA-34I	Intermediate	MWA-34I-081109	08/11/2009	< 25	UT	< 25.0	UT	< 25.0	UT	< 50	UT	< 25.0	UT	< 25.0	UT	< 25.0	UT	< 25.0	UT	< 25	UT	< 25	UT	0	UT
MWA-42	Shallow	MWA-42-081709	08/17/2009	< 0.350	U	< 0.600	U	< 0.200	U	< 0.300	U	**12.4**		**0.7**	J	< 0.500	U	< 0.500	U	**8.35**	J	< 0.500	U	**20.75**	
MWA-44	Shallow	MWA-44-081109	08/11/2009	< 0.140	U	< 0.240	U	< 0.0800	U	< 0.120	U	< 0.220	U	< 0.220	U	< 0.200	U	< 0.200	U	**0.56**	J	< 0.200	U	**2.2**	
MWA-45	Shallow	MWA-45-081709	08/17/2009	**0.07**	J	< 0.120	U	< 0.0400	U	< 0.0600	U	**2.31**		**0.66**		< 0.100	U	< 0.100	U	**0.53**		< 0.100	U	**3.19**	
MWA-46	Shallow	MWA-46-081009	08/10/2009	< 0.140	U	< 0.240	U	< 0.0800	U	< 0.120	U	**1.06**		< 0.220	U	< 0.200	U	< 0.200	U	**0.24**	J	< 0.200	U	**3.14**	
MWA-47	Shallow	MWA-47-080609	08/06/2009	< 0.140	U	< 0.240	U	< 0.0800	U	< 0.120	U	< 0.220	U	**0.64**	J	< 0.200	U	< 0.200	U	< 0.160	U	< 0.200	U	0	UT
MWA-49I	Intermediate	MWA-49I-081009	08/10/2009	< 1.40	U	< 2.40	U	< 0.800	U	< 1.20	U	< 2.20	U	< 2.20	U	< 2.00	U	< 2.00	U	< 1.60	U	< 2.00	U	0	UT
MWA-50I	Intermediate	MWA-50I-080609	08/06/2009	**0.32**	J	**0.24**	J	< 0.0800	U	< 0.120	U	< 0.220	U	**0.78**	J	< 0.200	U	< 0.200	U	< 0.160	U	< 0.200	U	0	UT
MWA-51I	Intermediate	MWA-51I-081009	08/10/2009	< 0.350	UJ	< 0.600	UJ	< 0.200	UJ	< 0.300	UJ	< 0.550	UJ	< 0.550	UJ	< 0.500	UJ	< 0.500	UJ	< 0.400	UJ	< 0.500	UJ	0	UT
MWA-54I	Intermediate	MWA-54I-081909	08/19/2009	< 0.350	U	< 0.600	U	< 0.200	U	< 0.300	U	< 0.550	U	< 0.550	U	< 0.500	U	< 0.500	U	< 0.400	U	< 0.500	U	0	UT
MWA-55I	Intermediate	MWA-55I-081709	08/17/2009	< 0.350	U	< 0.600	U	< 0.200	U	< 0.300	U	< 0.550	U	**0.55**	J	< 0.500	U	< 0.500	U	< 0.400	U	< 0.500	U	0	UT
MWA-56D	Deep	MWA-56D-081009	08/10/2009	< 0.700	U	< 1.20	U	< 0.400	U	< 0.600	U	< 1.10	U	< 1.10	U	< 1.00	U	< 1.00	U	< 0.800	U	< 1.00	U	0	UT
MWA-57D	Deep	MWA-57D-081709	08/17/2009	< 0.350	U	< 0.600	U	< 0.200	U	< 0.300	U	< 0.550	U	**0.8**	J	< 0.500	U	< 0.500	U	< 0.400	U	< 0.500	U	0	UT
MWA-58D	Deep	MWA-58D-081009	08/10/2009	< 1.40	U	< 2.40	U	< 0.800	U	< 1.20	U	< 2.20	U	< 2.20	U	< 2.00	U	< 2.00	U	< 1.60	U	< 2.00	U	0	UT
MWA-59D	Deep	MWA-59D-080609	08/06/2009	< 0.0700	U	< 0.120	U	**0.08**	J	< 0.0600	U	< 0.110	U	**0.81**		< 0.100	U	< 0.100	U	< 0.0800	U	< 0.100	U	0	UT
MWA-60	Shallow	MWA-60-080509	08/05/2009	< 0.350	U	< 0.600	U	< 0.200	U	< 0.300	U	< 0.550	U	< 0.550	U	< 0.500	U	< 0.500	U	**0.9**	J	< 0.500	U	**8.3**	
MWA-61	Shallow	MWA-61-081009	08/10/2009	< 1.40	UJ	< 2.40	UJ	< 0.800	UJ	< 1.20	UJ	**37.2**	J	< 2.20	UJ	< 2.00	UJ	< 2.00	UJ	**4.8**	J	< 2.00	UJ	**42**	
MWA-62	Shallow	MWA-62-081709	08/17/2009	< 0.0700	U	< 0.120	U	< 0.0400	U	< 0.0600	U	**7.44**		**0.49**	J	< 0.100	U	< 0.100	U	**0.35**	J	< 0.100	U	**8.15**	
MWA-63	Shallow	MWA-63-080509	08/05/2009	< 14.0	U	< 24.0	U	< 8.00	U	< 12.0	U	**186**		< 22.0	U	< 20.0	U	< 20.0	U	**36**	J	< 20.0	U	**222**	
MWA-64I	Intermediate	MWA-64I-080609	08/06/2009	< 3.50	U	< 6.00	U	< 2.00	U	< 3.00	U	**89**		< 5.50	U	< 5.00	U	< 5.00	U	< 4.00	U	< 5.00	U	**89**	
MWA-65I	Intermediate	MWA-65I-081709	08/17/2009	< 3.50	U	< 6.00	U	< 2.00	U	< 3.00	U	< 5.50	U	< 5.50	U	< 5.00	U	< 5.00	U	< 4.00	U	< 5.00	U	0	UT
MWA-66I	Intermediate	MWA-66I-081109	08/11/2009	< 7.00	U	< 12.0	U	< 4.00	U	< 6.00	U	< 11.0	U	< 11.0	U	< 10.0	U	< 10.0	U	< 8.00	U	< 10.0	U	0	UT
MWA-67SI	Shallow	MWA-67SI-080609	08/06/2009	< 70.0	U	< 120	U	< 40.0	U	< 60.0	U	**840**		< 110	U	< 100	U	< 100	U	< 80.0	U	< 100	U	**840**	
MWA-68SI	Shallow	MWA-68SI-081109	08/11/2009	< 7.00	U	**15**	J	< 4.00	U	< 6.00	U	**18**	J	< 11.0	U	< 10.0	U	< 10.0	U	< 8.00	U	< 10.0	U	**18**	
MWA-69	Shallow	MWA-69-081109	08/11/2009	< 7.00	U	**42**	J	< 4.00	U	< 6.00	U	< 11.0	U	< 11.0	U	< 10.0	U	< 10.0	U	< 8.00	U	< 10.0	U	0	UT
MWA-71	Shallow	MWA-71-080709	08/07/2009	< 0.140	U	< 0.240	U	< 0.0800	U	< 0.120	U	< 0.220	U	< 0.220	U	< 0.200	U	< 0.200	U	< 0.160	U	< 0.200	U	0	UT
MWA-72	Shallow	MWA-72-081709	08/17/2009	**0.39**	J	**0.19**	J	< 0.0400	U	< 0.0600	U	< 0.110	U	**1.94**		< 0.100	U	< 0.100	U	< 0.0800	U	< 0.100	U	0	UT
MWA-73	Shallow	MWA-73-081409	08/14/2009	< 0.0700	U	**0.16**	J	< 0.0400	U	< 0.0600	U	< 0.110	U	< 0.110	U	< 0.100	U	< 0.100	U	< 0.0800	U	< 0.100	U	0	UT
MWA-74I	Intermediate	MWA-74I-080709	08/07/2009	< 0.0700	U	< 0.120	U	< 0.0400	U	< 0.0600	U	< 0.110	U	**0.4**	J	< 0.100	U	< 0.100	U	< 0.0800	U	< 0.100	U	0	UT
MWA-75I	Intermediate	MWA-75I-1-081409	08/14/2009	< 0.0700	U	**0.3**	J	< 0.0400	U	< 0.0600	U	< 0.110	U	< 0.110	U	< 0.100	U	< 0.100	U	< 0.0800	U	< 0.100	U	0	UT
MWA-75I	Intermediate	MWA-75I-2-081409	08/14/2009	< 0.0700	U	**0.33**	J	< 0.0400	U	< 0.0600	U	< 0.110	U	< 0.110	U	< 0.100	U	< 0.100	U	< 0.0800	U	< 0.100	U	0	UT
MWA-76G	Gravel	MWA-76G-080709	08/07/2009	< 0.0700	U	< 0.120	U	**0.07**	J	< 0.0600	U	< 0.110	U	**0.5**		< 0.100	U	< 0.100	U	< 0.0800	U	< 0.100	U	0	UT
MWA-77G	Gravel	MWA-77G-081709	08/17/2009	**0.11**	J	< 0.120	U	< 0.0400	U	< 0.0600	U	< 0.110	U	**1.51**	J	< 0.100	U	< 0.100	U	< 0.0800	U	< 0.100	U	0	UT
NMP-3D	Shallow	NMP-3D-081909	08/19/2009	< 25	UT	**9.25**	JT	< 25.0	UT	< 50	UT	< 25.0	UT	< 25.0	UT	< 25.0	UT	< 25.0	UT	< 25	UT	< 25	UT	0	UT
NMP-4D	Shallow	NMP-4D-081909	08/19/2009	< 70.0	U	< 120	U	< 40.0	U	< 60.0	U	< 110	U	< 110	U	< 100	U	< 100	U	< 80.0	U	< 100	U	0	UT
PMP-4	Shallow	PMP-4-081109	08/11/2009	< 1.40	U	< 2.40	U	< 0.800	U	< 1.20	U	**4.6**	J	< 2.20	U	< 2.00	U	< 2.00	U	< 1.60	U	< 2.00	U	**4.6**	
PMP-6	Shallow	PMP-6-081109	08/11/2009	< 1.40	U	< 2.40	U	< 0.800	U	< 1.20	U	**7**	J	< 2.20	U	< 2.00	U	< 2.00	U	< 1.60	U	< 2.00	U	**7**	
PMP-5	Shallow	PMP-5-081109	08/11/2009	< 1.40	U	< 2.40	U	< 0.800	U	< 1.20	U	**19**		< 2.20	U	< 2.00	U	< 2.00	U	< 1.60	U	< 2.00	U	**19**	
RP-02-49	Intermediate	RP-02-49-081309	08/13/2009	< 0.350	U	**32**		< 0.200	U	< 0.300	U	< 0.550	U	< 0.550	U	< 0.500	U	< 0.500	U	**1.3**	J	**2.6**		**5**	
RP-02-66	Basalt	RP-02-66-081309	08/13/2009	< 0.350	U	**40.2**		< 0.200	U	< 0.300	U	< 0.550	U	< 0.550	U	< 0.500	U	< 0.500	U	**1.3**	J	**2.05**	J	**6.4**	
RP-08-23	Shallow	RP-08-23-081309	08/13/2009	< 0.140	U	< 0.240	U	< 0.0800	U	< 0.120	U	< 0.220	U	< 0.220	U	< 0.200	U	< 0.200	U	< 0.160	U	< 0.200	U	0	UT
RP-08-80	Intermediate	RP-08-80-081309	08/13/2009	< 1.40	U	**128**		< 0.800	U	< 1.20	U	< 2.20	U	< 2.20	UJ	< 2.00	U	< 2.00	U	**4.6**	J	**10**		**19.4**	
RP-08-107	Basalt	RP-08-107-081309	08/13/2009	< 1.40	U	**247**		< 0.800	U	< 1.20	U	< 2.20	U	< 2.20	U	< 2.00	U	< 2.00	U	**6.2**	J	**18.6**		**29.8**	
RP-09-35	Shallow	RP-09-35-081209	08/12/2009	< 0.140	U	< 0.240	U	< 0.0800	U	< 0.120	U	< 0.220	U	< 0.220	U	< 0.200	U	< 0.200	U	< 0.160	U	< 0.200	U	0	UT
RP-09-47	Intermediate	RP-09-47-081209	08/12/2009	< 0.0700	U	**0.12**	J	< 0.0400	U	< 0.0600	U	< 0.110	U	< 0.110	U	< 0.100	U	< 0.100	U	< 0.0800	U	< 0.100	U	0	UT
RP-09-64	Basalt	RP-09-64-081209	08/12/2009	< 0.0700	U	< 0.120	U	< 0.0400	U	< 0.0600	U	**0.16**	J	< 0.110	U	< 0.100	U	< 0.100	U	< 0.0800	U	< 0.100	U	**0.16**	
RP-10-30	Shallow	RP-10-30-081209	08/12/2009	**0.16**	J	< 0.120	UJ	< 0.0400	UJ	< 0.0600	UJ	< 0.110	UJ	**0.51**	J	< 0.100	UJ	< 0.100	UJ	< 0.0800	UJ	< 0.100	UJ	0	UT
RP-10-60	Intermediate	RP-10-60-081209	08/12/2009	**0.12**	J	< 0.120	UJ	< 0.0400	UJ	< 0.0600	UJ	< 0.110	UJ	< 0.110	UJ	< 0.100	UJ	< 0.100	UJ	**12.5**	J	< 0.100	UJ	**12.5**	
RP-10-97	Gravel	RP-10-97-081209	08/12/2009	< 0.0700	UJ	< 0.120	UJ	< 0.0400	UJ	< 0.0600	UJ	< 0.110	UJ	< 0.110	UJ	< 0.100	UJ	< 0.100	UJ	**0.74**	J	< 0.100	UJ	**0.74**	
RP-10-130	Basalt	RP-10-130-081209	08/12/2009	< 0.0700	UJ	< 0.120	UJ	< 0.0400	UJ	< 0.0600	UJ	< 0.110	UJ	**0.15**	J	< 0.100	UJ	< 0.100	UJ	**0.63**	J	< 0.100	UJ	**0.63**	
RP-13-11	Intermediate	RP-13-11-081809	08/18/2009	< 0.0700	U	< 0.120	U	< 0.0400	U	< 0.0600	U	< 0.110	U	**0.22**	J	< 0.100	U	< 0.100	U	< 0.0800	U	< 0.100	U	0	UT
RP-13-22	Intermediate	RP-13-22-081809	08/18/2009	< 0.0700	U	< 0.120	U	< 0.0400	U	< 0.0600	U	< 0.110	U	< 0.110	U	< 0.100	U	< 0.100	U	< 0.0800	U	< 0.100	U	0	UT
RP-13-33	Gravel	RP-13-33-081809	08/18/2009	< 0.350	U	**2.85**		< 0.200	U	< 0.300	U	< 0.550	U	< 0.550	U	< 0.500	U	< 0.500	U	< 0.400	U	< 0.500	U	0	UT
RP-13-43	Basalt	RP-13-43-081809	08/18/2009	< 0.700	U	**120**		< 0.400	U	< 0.600	U	< 1.10	U	< 1.10	U	< 1.00	U	< 1.00	U	**3.7**	J	**9.7**		**18.2**	
RP-14-26	Intermediate	RP-14-26-081809	08/18/2009	< 1	UT	< 1.00	UT	< 1.00	UT	< 2	UT	**1.28**	T	**0.24**	JT	< 1.00	UT	< 1.00	UT	**0.74**	JT	< 1	UT	**2.2**	
RP-14-39	Gravel	RP-14-39-081809	08/18/2009	< 0.140	U	< 0.240	U	< 0.0800	U	< 0.120	U	**0.44**	J	< 0.220	U	< 0.200	U	< 0.200	U	**0.3**	J	< 0.200	U	**0.74**	
W-19-D	Basalt	W-19-D-081409	08/14/2009	< 5	UT	**90.7**	T	< 5.00	UT	< 10	UT	< 5.00	UT	< 5.00	UT	**2.1**	JT	< 5.00	UT	**3.7**	JT	**9.65**	T	**18.85**	
W-19-I	Deep	W-19-I-081409	08/14/2009	< 0.0700	U	**0.12**	J	< 0.0400	U	< 0.0600	U	< 0.110	U	< 0.110	U	< 0.100	U	< 0.100	U	**0.75**		< 0.100	U	**0.75**	

Notes
ug/L = Micrograms per liter
Blank Cell = Not sampled
< = Compound not detected above the method detection limit

Data Qualifiers:
U = compound was not detected above the associated numerical value
J = Estimated value. Analyte detected at a level less than the Reporting Limit (RL).
Ja = Estimated value. Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL). The user of this data should be aware that this data is of limited reliability.
RL1 = Reporting limit raised due to sample matrix effects.
A = Total value based on limited number of analytes
T = Result derived or selected from >1 reported value.

Table 3
Pesticide and Herbicide Results
August 2009 Sitewide Groundwater Monitoring
Arkema, Inc. Facility
Portland, Oregon

Wells	Aquifer	Sample ID	Sample Date	4,4-DDD ug/l		4,4-DDE ug/l		4,4-DDT ug/l		DDx ug/l		Aldrin ug/l		alpha-BHC ug/l	
MWA-2	Shallow	MWA-2-080609	08/06/2009	< 0.286	U	< 0.286	U	**0.191**		**0.191**	A	< 0.190	U	< 0.190	U
MWA-3	Shallow	MWA-3-081009	08/10/2009	**0.384**		**0.226**		**1.43**		**2.04**	A	< 0.0240	U	< 0.0240	U
MWA-4	Shallow	MWA-4-081109	08/11/2009	**9.07**		< 0.476	U	< 0.476	U	**9.07**	A	< 0.238	U	< 0.238	U
MWA-5	Shallow	MWA-5-080509	08/05/2009	**0.0151**		< 0.00476	U	**0.0126**		**0.0277**	A	< 0.00476	U	< 0.00476	U
MWA-6R	Shallow	MWA-6R-081109	08/11/2009	**0.0566**	J	**0.052**	J	**0.0917**	J	**0.2**	JA	< 0.0238	U	< 0.0238	U
MWA-7(I)	Intermediate	MWA-7(I)-081409	08/14/2009	< 0.0191	U	< 0.0191	U	< 0.0191	U	< 0.0383	UA	< 0.0191	U	< 0.0191	U
MWA-8I	Intermediate	MWA-8I-080609	08/06/2009	< 0.0190	U	< 0.00952	U	**0.0194**		**0.0194**	A	< 0.00952	U	< 0.00952	U
MWA-9I	Intermediate	MWA-9I-081109	08/11/2009	**1.44**		< 0.240	U	< 0.120	U	**1.44**	A	< 0.120	U	< 0.120	U
MWA-10I	Intermediate	MWA-10I-081109	08/11/2009	**0.0438**	J	< 0.0240	U	**0.0329**	J	**0.0767**	JA	< 0.0240	U	< 0.0240	U
MWA-11I(D)	Deep	MWA-11I-081909	08/19/2009	**0.658**		**0.0459**	J	**0.0599**	J	**0.764**	JA	< 0.0240	U	< 0.0240	U
MWA-12I(D)	Deep	MWA-12I(D)-081409	08/14/2009	**0.0135**	T	< 0.00948	UT	**0.00598**	JT	**0.0195**	JA	< 0.00948	UT	< 0.00948	UT
MWA-13D	Deep	MWA-13D-081009	08/10/2009	**0.0744**	J	< 0.0481	U	**0.0294**	J	**0.104**	JA	< 0.0240	U	< 0.0240	U
MWA-14I(D)	Deep	MWA-14I(D)-080509	08/05/2009	**0.019**		< 0.00476	U	**0.0078**	J	**0.0268**	JA	< 0.00476	U	< 0.00476	U
MWA-15R	Shallow	MWA-15R-081909	08/19/2009	**111**		**21.9**		**702**		**835**	A	< 0.481	U	< 0.962	U
MWA-15R*	Shallow	MWA-15R-090309	09/03/2009	**377**		**52.1**		**5210**		**5640**	A	< 1.05	U	< 1.05	U
MWA-16I	Intermediate	MWA-16I-081109	08/11/2009	**0.0101**	J	< 0.00966	U	< 0.00966	U	**0.0101**	JA	< 0.00966	U	< 0.00966	U
MWA-17SI	Shallow	MWA-17SI-081009	08/10/2009	< 5.24	U	< 0.952	U	**0.64**	J	**0.64**	JA	< 0.238	U	< 0.238	U
MWA-18	Shallow	MWA-18-081009	08/10/2009	**0.0155**		**0.00671**	J	**0.00789**	J	**0.0301**	JA	< 0.00488	U	< 0.00488	U
MWA-19	Shallow	MWA-19-081009	08/10/2009	**0.183**	J	**0.175**	J	**1.14**		**1.5**	JA	< 0.0476	U	< 0.0476	U
MWA-20	Shallow	MWA-20-081709	08/17/2009	< 0.00476	U	< 0.00476	U	**0.00836**	J	**0.00836**	JA	< 0.00476	U	< 0.00476	U
MWA-22	Shallow	MWA-22-081909	08/19/2009	< 0.144	U	< 0.0481	U	< 0.0481	U	< 0.144	UA	< 0.0240	U	< 0.0240	U
MWA-29	Shallow	MWA-29-080609	08/06/2009	< 0.00476	U	< 0.00476	U	< 0.00952	U	< 0.00952	UA	< 0.00476	U	**0.014**	
MWA-30	Shallow	MWA-30-081009	08/10/2009	**0.148**		< 0.00943	U	< 0.00943	U	**0.148**	A	< 0.00943	U	< 0.00943	U
MWA-31I(D)	Deep	MWA-31I(D)-081009	08/10/2009	< 0.00476	U	< 0.00476	U	< 0.00476	U	< 0.00952	UA	< 0.00476	U	< 0.00476	U
MWA-32I	Intermediate	MWA-32I-081009	08/10/2009	**0.0568**	J	< 0.0481	U	< 0.0240	U	**0.0568**	JA	< 0.0240	U	< 0.0481	U
MWA-33	Shallow	MWA-33-080509	08/05/2009	< 0.0190	U	< 0.0190	U	< 0.0190	U	< 0.0952	UA	< 0.0190	U	< 0.0190	U
MWA-34I	Intermediate	MWA-34I-081109	08/11/2009	< 0.0200	U	< 0.0100	U	< 0.0100	U	< 0.02	UA	< 0.0100	U	< 0.0100	U
MWA-42	Shallow	MWA-42-081709	08/17/2009	**0.104**		**0.152**		< 0.0952	U	**0.256**	A	< 0.0238	U	< 0.0238	U
MWA-44	Shallow	MWA-44-081109	08/11/2009	**0.16**		**0.0324**	J	**0.0433**	J	**0.236**	JA	< 0.0240	U	< 0.0240	U
MWA-45	Shallow	MWA-45-081709	08/17/2009	**0.00484**	J	< 0.00476	U	**0.00667**	J	**0.0115**	JA	< 0.00476	U	< 0.00476	U
MWA-46	Shallow	MWA-46-081009	08/10/2009	**0.429**		**0.176**	J	**0.728**		**1.33**	JA	< 0.0481	U	< 0.0481	U
MWA-47	Shallow	MWA-47-080609	08/06/2009	**0.2**		**0.0353**	J	**0.0931**	J	**0.328**	JA	< 0.0238	U	< 0.0238	U
MWA-49I	Intermediate	MWA-49I-081009	08/10/2009	**0.0402**	J	**0.0394**	J	**0.269**		**0.349**	JA	< 0.0481	U	< 0.0481	U
MWA-50I	Intermediate	MWA-50I-080609	08/06/2009	< 0.00952	U	< 0.00476	U	< 0.00952	U	< 0.00952	UA	< 0.00476	U	< 0.00476	U
MWA-51I	Intermediate	MWA-51I-081009	08/10/2009	**0.113**		< 0.0481	U	**0.0363**	J	**0.149**	JA	< 0.0240	U	< 0.0240	U
MWA-54I	Intermediate	MWA-54I-081909	08/19/2009	**0.0477**	JT	**0.00991**	JT	**0.0303**	JT	**0.0879**	JA	< 0.00952	UT	< 0.00952	UT
MWA-55I	Intermediate	MWA-55I-081709	08/17/2009	< 0.0476	U	< 0.0476	U	< 0.0476	U	< 0.0952	UA	< 0.0476	U	< 0.0476	U
MWA-56D	Deep	MWA-56D-081009	08/10/2009	< 0.00488	U	< 0.00976	U	**0.0069**	J	**0.0069**	JA	< 0.00976	U	< 0.00976	U
MWA-57D	Deep	MWA-57D-081709	08/17/2009	< 0.00476	U	**0.00515**	J	**0.00709**	J	**0.0122**	JA	< 0.00476	U	< 0.00476	U
MWA-58D	Deep	MWA-58D-081009	08/10/2009	< 0.00472	U	< 0.00943	U	**0.0286**		**0.0286**	A	< 0.00943	U	< 0.0189	U
MWA-59D	Deep	MWA-59D-080609	08/06/2009	< 0.00478	U	< 0.00478	U	**0.00794**	J	**0.00794**	JA	< 0.00478	U	< 0.00957	U
MWA-60	Shallow	MWA-60-080509	08/05/2009	< 0.0190	U	< 0.0190	U	< 0.0190	U	< 0.0952	UA	< 0.0190	U	< 0.0190	U
MWA-61	Shallow	MWA-61-081009	08/10/2009	**0.356**	J	< 0.119	U	< 0.119	U	**0.356**	JA	< 0.119	U	< 0.119	U
MWA-62	Shallow	MWA-62-081709	08/17/2009	**0.599**	J	**0.553**	J	**30.8**		**32**	JA	< 0.192	U	< 0.192	U
MWA-63	Shallow	MWA-63-080509	08/05/2009	< 0.00952	U	< 0.00476	U	**0.00574**	J	**0.00574**	JA	< 0.00476	U	< 0.00476	U
MWA-64I	Intermediate	MWA-64I-080609	08/06/2009	**0.029**	J	< 0.0238	U	**0.0319**	J	**0.0609**	JA	< 0.0238	U	< 0.0238	U
MWA-65I	Intermediate	MWA-65I-081709	08/17/2009	**1.44**		**0.0728**	J	**0.479**		**1.99**	JA	< 0.0476	U	< 0.0476	U
MWA-66I	Intermediate	MWA-66I-081109	08/11/2009	< 0.0340	U	< 0.00485	U	**0.0062**	J	**0.0062**	JA	< 0.0146	U	< 0.00485	U
MWA-67SI	Shallow	MWA-67SI-080609	08/06/2009	< 0.571	U	< 0.190	U	**0.303**		**0.303**	A	< 0.286	U	< 0.381	U
MWA-68SI	Shallow	MWA-68SI-081109	08/11/2009	< 1.20	U	< 0.120	U	**1.22**		**1.22**	A	< 0.120	U	< 0.120	U
MWA-69	Shallow	MWA-69-081109	08/11/2009	**57**	T	**4.06**	T	**66.2**	T	**127**	A	< 0.481	UT	< 0.481	UT
MWA-69*	Shallow	MWA-69-090309	09/03/2009	**7.45**		**0.369**		**5.95**		**13.8**	A	< 0.190	U	< 0.0952	U
MWA-71	Shallow	MWA-71-080709	08/07/2009	**0.0717**		< 0.00478	U	**0.0125**		**0.0842**	A	< 0.00478	U	< 0.00478	U
MWA-72	Shallow	MWA-72-081709	08/17/2009	< 0.00476	U	**0.00942**	J	< 0.00476	U	**0.00942**	JA	< 0.00952	U	< 0.00476	U
MWA-73	Shallow	MWA-73-081409	08/14/2009	**0.107**		**0.0264**		**0.0394**		**0.173**	A	< 0.00980	U	< 0.00980	U
MWA-74I	Intermediate	MWA-74I-080709	08/07/2009	< 0.00957	U	< 0.00957	U	**0.0122**	J	**0.0122**	JA	< 0.0191	U	< 0.00957	U
MWA-75I	Intermediate	MWA-75I-1-081409	08/14/2009	< 0.00490	U	< 0.00980	U	< 0.00980	U	< 0.0098	UA	< 0.00980	U	< 0.00490	U
MWA-75I	Intermediate	MWA-75I-2-081409	08/14/2009	< 0.00488	U	**0.00595**	J	< 0.00976	U	**0.00595**	JA	< 0.00488	U	< 0.00488	U
MWA-76G	Gravel	MWA-76G-080709	08/07/2009	< 0.00490	U	< 0.00490	U	< 0.00490	U	< 0.0098	UA	< 0.00490	U	< 0.00490	U
MWA-77G	Gravel	MWA-77G-081709	08/17/2009	< 0.00476	U	< 0.00476	U	< 0.00476	U	< 0.00952	UA	< 0.00476	U	< 0.00476	U
NMP-3D	Shallow	NMP-3D-081909	08/19/2009	**1.03**	JT	**0.255**	JT	**6.54**	T	**7.83**	JA	< 0.385	UT	< 0.385	UT
NMP-4D	Shallow	NMP-4D-081909	08/19/2009	**28.4**		**8.26**		**302**		**339**	A	< 0.485	U	< 0.485	U
PMP-4	Shallow	PMP-4-081109	08/11/2009	**0.245**	J	**0.166**	J	**5.5**		**5.91**	JA	< 0.120	U	< 0.120	U
PMP-6	Shallow	PMP-6-081109	08/11/2009	**1.38**		**0.463**	J	**14.8**		**16.6**	JA	< 0.240	U	< 0.240	U
PMP-5	Shallow	PMP-5-081109	08/11/2009	**2.86**		**0.724**	J	**15.8**		**19.4**	JA	< 0.240	U	< 0.240	U
RP-02-49	Intermediate	RP-02-49-081309	08/13/2009	< 0.00962	U	< 0.00962	U	< 0.00962	U	< 0.0192	UA	< 0.00962	U	< 0.0192	U
RP-02-66	Basalt	RP-02-66-081309	08/13/2009	< 0.0190	U	< 0.00952	U	< 0.00952	U	< 0.019	UA	< 0.00952	U	< 0.0190	U
RP-08-23	Shallow	RP-08-23-081309	08/13/2009	**0.119**		**0.024**		< 0.00952	U	**0.143**	A	< 0.00952	U	< 0.00952	U
RP-08-80	Intermediate	RP-08-80-081309	08/13/2009	< 0.00957	U	< 0.00957	U	< 0.0287	U	< 0.0287	UA	< 0.00957	U	< 0.0287	U
RP-08-107	Basalt	RP-08-107-081309	08/13/2009	< 0.0385	U	< 0.00962	U	< 0.0192	U	< 0.0385	UA	< 0.00962	U	< 0.0481	U
RP-09-35	Shallow	RP-09-35-081209	08/12/2009	**0.0558**		**0.0427**		< 0.00962	U	**0.0985**	A	< 0.00481	U	< 0.00481	U
RP-09-47	Intermediate	RP-09-47-081209	08/12/2009	< 0.00481	U	< 0.00481	U	< 0.00481	U	< 0.00962	UA	< 0.00481	U	< 0.00481	U
RP-09-64	Basalt	RP-09-64-081209	08/12/2009	**0.00699**	JT	< 0.00952	UT	< 0.00952	UT	**0.00699**	JA	< 0.00952	UT	< 0.00952	UT
RP-10-30	Shallow	RP-10-30-081209	08/12/2009	< 0.00976	UJ	< 0.00976	UJ	< 0.00976	UJ	< 0.00976	UJA	< 0.00488	UJ	< 0.00488	UJ
RP-10-60	Intermediate	RP-10-60-081209	08/12/2009	< 0.00962	UJ	< 0.00481	UJ	< 0.00481	UJ	< 0.00962	UJA	< 0.00481	UJ	< 0.00481	UJ
RP-10-97	Gravel	RP-10-97-081209	08/12/2009	< 0.00513	UJ	< 0.00513	UJ	< 0.00513	UJ	< 0.0103	UJA	< 0.00513	UJ	< 0.00513	UJ
RP-10-130	Basalt	RP-10-130-081209	08/12/2009	< 0.00500	UJ	< 0.00500	UJ	< 0.00500	UJ	< 0.01	UJA	< 0.00500	UJ	< 0.00500	UJ
RP-13-11	Intermediate	RP-13-11-081809	08/18/2009	**0.222**		< 0.0192	U	< 0.00962	U	**0.222**	A	< 0.00962	U	< 0.00962	U
RP-13-22	Intermediate	RP-13-22-081809	08/18/2009	< 0.00962	U	< 0.00962	U	< 0.00962	U	< 0.0192	UA	< 0.00962	U	< 0.00962	U
RP-13-33	Gravel	RP-13-33-081809	08/18/2009	< 0.00962	U	< 0.00962	U	< 0.00962	U	< 0.0192	UA	< 0.00962	U	< 0.00962	U
RP-13-43	Basalt	RP-13-43-081809	08/18/2009	< 0.00976	U	< 0.00976	U	< 0.0195	U	< 0.0195	UA	< 0.00976	U	< 0.0195	U
RP-14-26	Intermediate	RP-14-26-081809	08/18/2009	< 0.00481	U	< 0.00481	U	< 0.00481	U	< 0.00962	UA	< 0.00481	U	< 0.00481	U
RP-14-39	Gravel	RP-14-39-081809	08/18/2009	< 0.00476	U	< 0.00476	U	< 0.00476	U	< 0.00952	UA	< 0.00476	U	< 0.00476	U
W-19-D	Basalt	W-19-D-081409	08/14/2009	< 0.00952	U	< 0.00952	U	< 0.00952	U	< 0.019	UA	< 0.00952	U	< 0.0286	U
W-19-I	Deep	W-19-I-081409	08/14/2009	< 0.00976	U	< 0.00976	U	< 0.00976	U	< 0.0195	UA	< 0.00976	U	< 0.00976	U

Table 3
Pesticide and Herbicide Results
August 2009 Sitewide Groundwater Monitoring
Arkema, Inc. Facility
Portland, Oregon

Wells	Aquifer	Sample ID	Sample Date	alpha-Chlordane ug/l		beta-BHC ug/l		Chlordane, Technical ug/l		Chlorinated camphene (Toxaphene) ug/l		delta-BHC ug/l		Dieldrin ug/l	
MWA-2	Shallow	MWA-2-080609	08/06/2009	< 0.190	U	< 0.190	U	< 1.90	U	< 4.76	U	**0.284**		< 0.190	U
MWA-3	Shallow	MWA-3-081009	08/10/2009	< 0.0240	U	< 0.0240	U	< 0.240	U	< 0.654	U	< 0.0240	U	< 0.0240	U
MWA-4	Shallow	MWA-4-081109	08/11/2009	< 0.238	U	< 0.238	U	< 2.38	U	< 6.48	U	< 0.238	U	< 0.238	U
MWA-5	Shallow	MWA-5-080509	08/05/2009	< 0.00476	U	< 0.00476	U	< 0.0476	U	< 0.238	U	< 0.00476	U	< 0.00476	U
MWA-6R	Shallow	MWA-6R-081109	08/11/2009	< 0.0238	U	< 0.0238	U	< 0.238	U	< 0.648	U	< 0.0238	U	< 0.0238	U
MWA-7(I)	Intermediate	MWA-7(I)-081409	08/14/2009	< 0.0191	U	< 0.0383	U	< 0.191	U	< 0.957	U	< 0.0191	U	< 0.0191	U
MWA-8I	Intermediate	MWA-8I-080609	08/06/2009	< 0.00952	U	< 0.0190	U	< 0.0952	U	< 0.476	U	< 0.00952	U	< 0.00952	U
MWA-9I	Intermediate	MWA-9I-081109	08/11/2009	< 0.120	U	< 0.120	U	< 1.20	U	< 3.27	U	< 0.240	U	< 0.120	U
MWA-10I	Intermediate	MWA-10I-081109	08/11/2009	< 0.0240	U	< 0.0240	U	< 0.240	U	< 0.654	U	< 0.0240	U	< 0.0240	U
MWA-11I(D)	Deep	MWA-11I-081909	08/19/2009	< 0.0240	U	< 0.0240	U	< 0.240	U	< 0.654	U	< 0.0240	U	< 0.0240	U
MWA-12I(D)	Deep	MWA-12I(D)-081409	08/14/2009	< 0.00948	UT	< 0.00948	UT	< 0.0948	UT	< 0.237	UT	< 0.00948	UT	< 0.00948	UT
MWA-13D	Deep	MWA-13D-081009	08/10/2009	< 0.0240	U	< 0.0240	U	< 0.144	U	< 0.654	U	< 0.0481	U	< 0.0240	U
MWA-14I(D)	Deep	MWA-14I(D)-080509	08/05/2009	< 0.00476	U	< 0.00476	U	< 0.0476	U	< 0.238	U	< 0.00476	U	< 0.00476	U
MWA-15R	Shallow	MWA-15R-081909	08/19/2009	< 0.481	U	< 0.962	U	< 4.81	U	< 6.54	U	< 0.481	U	< 1.44	U
MWA-15R*	Shallow	MWA-15R-090309	09/03/2009	< 3.16	U	< 1.05	U	< 10.5	U	< 14.3	U	< 1.05	U	< 2.11	U
MWA-16I	Intermediate	MWA-16I-081109	08/11/2009	< 0.00966	U	< 0.0193	U	< 0.0966	U	< 0.483	U	< 0.0193	U	< 0.00966	U
MWA-17SI	Shallow	MWA-17SI-081009	08/10/2009	< 0.238	U	< 0.238	U	< 2.38	U	< 6.48	U	**1.23**		< 0.238	U
MWA-18	Shallow	MWA-18-081009	08/10/2009	< 0.00488	U	< 0.00488	U	< 0.0488	U	< 0.244	U	< 0.00488	U	< 0.00488	U
MWA-19	Shallow	MWA-19-081009	08/10/2009	< 0.0476	U	< 0.0476	U	< 0.476	U	< 1.30	U	< 0.0476	U	< 0.0476	U
MWA-20	Shallow	MWA-20-081709	08/17/2009	< 0.00476	U	< 0.00952	U	< 0.0476	U	< 0.238	U	< 0.00476	U	< 0.00476	U
MWA-22	Shallow	MWA-22-081909	08/19/2009	< 0.0240	U	< 0.0240	U	< 0.240	U	< 0.654	U	< 0.0240	U	< 0.0240	U
MWA-29	Shallow	MWA-29-080609	08/06/2009	< 0.00476	U	< 0.0190	U	< 0.0476	U	< 0.238	U	< 0.00952	U	< 0.00476	U
MWA-30	Shallow	MWA-30-081009	08/10/2009	< 0.00472	U	< 0.00472	U	< 0.0472	U	< 0.236	U	< 0.00943	U	< 0.00943	U
MWA-31I(D)	Deep	MWA-31I(D)-081009	08/10/2009	< 0.00476	U	< 0.00476	U	< 0.0476	U	< 0.238	U	< 0.00476	U	< 0.00476	U
MWA-32I	Intermediate	MWA-32I-081009	08/10/2009	< 0.0240	U	< 0.0481	U	< 0.0240	U	< 0.654	U	< 0.0481	U	< 0.0240	U
MWA-33	Shallow	MWA-33-080509	08/05/2009	< 0.0190	U	< 0.0190	U	< 0.190	U	< 0.476	U	< 0.0190	U	< 0.0190	U
MWA-34I	Intermediate	MWA-34I-081109	08/11/2009	< 0.0100	U	< 0.0100	U	< 0.100	U	< 0.500	U	< 0.0100	U	< 0.0100	U
MWA-42	Shallow	MWA-42-081709	08/17/2009	< 0.0238	U	< 0.0952	U	< 0.238	U	< 0.648	U	< 0.0238	U	< 0.0238	U
MWA-44	Shallow	MWA-44-081109	08/11/2009	< 0.0240	U	< 0.0240	U	< 0.240	U	< 0.654	U	< 0.0240	U	< 0.0240	U
MWA-45	Shallow	MWA-45-081709	08/17/2009	< 0.00476	U	< 0.00476	U	< 0.0476	U	< 0.238	U	< 0.00476	U	< 0.00476	U
MWA-46	Shallow	MWA-46-081009	08/10/2009	< 0.0481	U	< 0.0481	U	< 0.481	U	< 1.31	U	< 0.0481	U	< 0.0481	U
MWA-47	Shallow	MWA-47-080609	08/06/2009	< 0.0238	U	< 0.0476	U	< 0.238	U	< 0.648	U	< 0.0238	U	< 0.0952	U
MWA-49I	Intermediate	MWA-49I-081009	08/10/2009	< 0.0240	U	< 0.0240	U	< 0.240	U	< 0.654	U	< 0.0481	U	< 0.0240	U
MWA-50I	Intermediate	MWA-50I-080609	08/06/2009	< 0.00476	U	< 0.00952	U	< 0.0476	U	< 0.238	U	< 0.00476	U	< 0.00476	U
MWA-51I	Intermediate	MWA-51I-081009	08/10/2009	< 0.0240	U	< 0.0481	U	< 0.240	U	< 0.654	U	< 0.0481	U	< 0.0240	U
MWA-54I	Intermediate	MWA-54I-081909	08/19/2009	< 0.00952	UT	< 0.00952	UT	< 0.0952	UT	< 0.238	UT	< 0.00952	UT	< 0.00952	UT
MWA-55I	Intermediate	MWA-55I-081709	08/17/2009	< 0.0476	U	< 0.0476	U	< 0.476	U	< 2.38	U	< 0.0476	U	< 0.0476	U
MWA-56D	Deep	MWA-56D-081009	08/10/2009	< 0.00488	U	< 0.00488	U	< 0.0488	U	< 0.244	U	< 0.00976	U	< 0.00488	U
MWA-57D	Deep	MWA-57D-081709	08/17/2009	< 0.00476	U	< 0.00476	U	< 0.0476	U	< 0.238	U	< 0.00476	U	< 0.00476	U
MWA-58D	Deep	MWA-58D-081009	08/10/2009	< 0.00472	U	< 0.00472	U	< 0.0472	U	< 0.236	U	< 0.0142	U	< 0.00472	U
MWA-59D	Deep	MWA-59D-080609	08/06/2009	< 0.00478	U	< 0.00957	U	< 0.0478	U	< 0.239	U	< 0.00478	U	< 0.00478	U
MWA-60	Shallow	MWA-60-080509	08/05/2009	< 0.0190	U	< 0.0190	U	< 0.190	U	< 0.476	U	< 0.0190	U	< 0.0190	U
MWA-61	Shallow	MWA-61-081009	08/10/2009	< 0.119	U	< 0.119	U	< 1.19	U	< 3.24	U	< 0.238	U	< 0.119	U
MWA-62	Shallow	MWA-62-081709	08/17/2009	< 0.192	U	< 0.769	U	< 1.92	U	< 5.23	U	< 0.192	U	< 0.192	U
MWA-63	Shallow	MWA-63-080509	08/05/2009	< 0.00476	U	< 0.00952	U	< 0.0476	U	< 0.238	U	< 0.00476	U	< 0.00476	U
MWA-64I	Intermediate	MWA-64I-080609	08/06/2009	< 0.0238	U	< 0.0238	U	< 0.238	U	< 0.648	U	< 0.0476	U	< 0.0238	U
MWA-65I	Intermediate	MWA-65I-081709	08/17/2009	< 0.0476	U	< 0.190	U	< 0.476	U	< 1.30	U	< 0.0476	U	< 0.0476	U
MWA-66I	Intermediate	MWA-66I-081109	08/11/2009	< 0.0243	U	< 0.00485	U	< 0.0485	U	< 0.243	U	< 0.00485	U	< 0.00485	U
MWA-67SI	Shallow	MWA-67SI-080609	08/06/2009	< 0.190	U	< 1.52	U	< 1.90	U	< 4.76	U	< 0.667	U	< 0.190	U
MWA-68SI	Shallow	MWA-68SI-081109	08/11/2009	< 0.120	U	< 0.481	U	< 1.20	U	< 3.27	U	< 0.240	U	< 0.120	U
MWA-69	Shallow	MWA-69-081109	08/11/2009	< 0.481	UT	< 0.481	UT	< 4.81	UT	< 12	UT	< 0.481	UT	< 0.481	UT
MWA-69*	Shallow	MWA-69-090309	09/03/2009	< 0.571	U	< 0.286	U	< 0.952	U	< 1.30	U	< 0.190	U	< 0.476	U
MWA-71	Shallow	MWA-71-080709	08/07/2009	< 0.00478	U	< 0.00478	U	< 0.0478	U	< 0.239	U	< 0.00478	U	< 0.00478	U
MWA-72	Shallow	MWA-72-081709	08/17/2009	< 0.00476	U	< 0.00476	U	< 0.0476	U	< 0.238	U	< 0.00476	U	< 0.00952	U
MWA-73	Shallow	MWA-73-081409	08/14/2009	< 0.00980	U	< 0.00980	U	< 0.0980	U	< 0.490	U	< 0.00980	U	< 0.0196	U
MWA-74I	Intermediate	MWA-74I-080709	08/07/2009	< 0.00957	U	< 0.0191	U	< 0.0957	U	< 0.478	U	< 0.00957	U	< 0.00957	U
MWA-75I	Intermediate	MWA-75I-1-081409	08/14/2009	< 0.00490	U	< 0.00490	U	< 0.0490	U	< 0.245	U	< 0.00490	U	< 0.00490	U
MWA-75I	Intermediate	MWA-75I-2-081409	08/14/2009	< 0.00488	U	< 0.00488	U	< 0.0488	U	< 0.244	U	< 0.00488	U	< 0.00488	U
MWA-76G	Gravel	MWA-76G-080709	08/07/2009	< 0.00490	U	< 0.00490	U	< 0.0490	U	< 0.245	U	< 0.00490	U	< 0.00490	U
MWA-77G	Gravel	MWA-77G-081709	08/17/2009	< 0.00476	U	< 0.00476	U	< 0.0476	U	< 0.238	U	< 0.00476	U	< 0.00476	U
NMP-3D	Shallow	NMP-3D-081909	08/19/2009	< 0.385	UT	< 0.385	UT	< 3.85	UT	< 9.62	UT	< 0.385	UT	< 0.385	UT
NMP-4D	Shallow	NMP-4D-081909	08/19/2009	< 0.971	U	< 0.971	U	< 4.85	U	< 6.60	U	< 0.485	U	< 2.43	U
PMP-4	Shallow	PMP-4-081109	08/11/2009	< 0.120	U	< 0.120	U	< 1.20	U	< 3.27	U	< 0.120	U	< 0.120	U
PMP-6	Shallow	PMP-6-081109	08/11/2009	< 0.240	U	< 0.240	U	< 2.40	U	< 6.54	U	< 0.481	U	< 0.240	U
PMP-5	Shallow	PMP-5-081109	08/11/2009	< 0.240	U	< 0.240	U	< 2.40	U	< 6.54	U	**0.561**	J	< 0.962	U
RP-02-49	Intermediate	RP-02-49-081309	08/13/2009	< 0.00962	U	< 0.00962	U	< 0.0962	U	< 0.481	U	< 0.00962	U	< 0.00962	U
RP-02-66	Basalt	RP-02-66-081309	08/13/2009	< 0.00952	U	< 0.00952	U	< 0.0952	U	< 0.476	U	< 0.00952	U	< 0.00952	U
RP-08-23	Shallow	RP-08-23-081309	08/13/2009	< 0.00952	U	< 0.00952	U	< 0.0952	U	< 0.476	U	< 0.00952	U	< 0.00952	U
RP-08-80	Intermediate	RP-08-80-081309	08/13/2009	< 0.0287	U	< 0.00957	U	< 0.0957	U	< 0.478	U	< 0.0191	U	< 0.0191	U
RP-08-107	Basalt	RP-08-107-081309	08/13/2009	< 0.0192	U	< 0.00962	U	< 0.0962	U	< 0.481	U	< 0.00962	U	< 0.00962	U
RP-09-35	Shallow	RP-09-35-081209	08/12/2009	< 0.00481	U	< 0.00962	U	< 0.0481	U	< 0.240	U	< 0.00962	U	< 0.00962	U
RP-09-47	Intermediate	RP-09-47-081209	08/12/2009	< 0.00481	U	< 0.00481	U	< 0.0481	U	< 0.240	U	< 0.00481	U	< 0.00481	U
RP-09-64	Basalt	RP-09-64-081209	08/12/2009	< 0.00952	UT	< 0.00952	UT	< 0.0952	UT	< 0.238	UT	< 0.00952	UT	< 0.00952	UT
RP-10-30	Shallow	RP-10-30-081209	08/12/2009	**0.025**	J	< 0.00488	UJ	< 0.0488	UJ	< 0.244	UJ	< 0.00488	UJ	< 0.00488	UJ
RP-10-60	Intermediate	RP-10-60-081209	08/12/2009	< 0.00481	UJ	< 0.00481	UJ	< 0.0481	UJ	< 0.240	UJ	< 0.00481	UJ	< 0.00481	UJ
RP-10-97	Gravel	RP-10-97-081209	08/12/2009	< 0.00513	UJ	< 0.00513	UJ	< 0.0513	UJ	< 0.256	UJ	< 0.00513	UJ	< 0.00513	UJ
RP-10-130	Basalt	RP-10-130-081209	08/12/2009	< 0.00500	UJ	< 0.00500	UJ	< 0.0500	UJ	< 0.250	UJ	< 0.00500	UJ	< 0.00500	UJ
RP-13-11	Intermediate	RP-13-11-081809	08/18/2009	< 0.00962	U	< 0.00962	U	< 0.0962	U	< 0.481	U	< 0.00962	U	< 0.00962	U
RP-13-22	Intermediate	RP-13-22-081809	08/18/2009	< 0.00962	U	< 0.00962	U	< 0.0962	U	< 0.481	U	< 0.00962	U	< 0.00962	U
RP-13-33	Gravel	RP-13-33-081809	08/18/2009	< 0.00962	U	< 0.00962	U	< 0.0962	U	< 0.481	U	< 0.00962	U	< 0.00962	U
RP-13-43	Basalt	RP-13-43-081809	08/18/2009	< 0.0195	U	< 0.0195	U	< 0.0976	U	< 0.488	U	< 0.00976	U	< 0.00976	U
RP-14-26	Intermediate	RP-14-26-081809	08/18/2009	< 0.00481	U	< 0.00481	U	< 0.0481	U	< 0.240	U	< 0.00962	U	< 0.00481	U
RP-14-39	Gravel	RP-14-39-081809	08/18/2009	< 0.00476	U	< 0.00476	U	< 0.0476	U	< 0.238	U	< 0.00476	U	< 0.00476	U
W-19-D	Basalt	W-19-D-081409	08/14/2009	< 0.0190	U	< 0.00952	U	< 0.0952	U	< 0.476	U	< 0.00952	U	< 0.00952	U
W-19-I	Deep	W-19-I-081409	08/14/2009	< 0.00976	U	< 0.00976	U	< 0.0976	U	< 0.488	U	< 0.00976	U	< 0.00976	U

Table 3
Pesticide and Herbicide Results
August 2009 Sitewide Groundwater Monitoring
Arkema, Inc. Facility
Portland, Oregon

Wells	Aquifer	Sample ID	Sample Date	Endosulfan I ug/l		Endosulfan II ug/l		Endosulfan sulfate ug/l		Endrin ug/l		Endrin aldehyde ug/l		Endrin ketone ug/l		gamma-Chlordane ug/l		Heptachlor ug/l	
MWA-2	Shallow	MWA-2-080609	08/06/2009	< 0.190	U	< 0.190	U	< 0.190	U	< 0.381	U	< 0.476	U	< 0.190	U	< 0.190	U	< 0.190	U
MWA-3	Shallow	MWA-3-081009	08/10/2009	< 0.0240	U	< 0.0240	U	< 0.0240	U	< 0.0240	U	< 0.0240	U	< 0.0240	U	< 0.0240	U	< 0.0240	U
MWA-4	Shallow	MWA-4-081109	08/11/2009	< 0.238	U	< 0.238	U	< 0.238	U	< 0.238	U	< 0.238	U	< 0.238	U	< 0.238	U	< 0.238	U
MWA-5	Shallow	MWA-5-080509	08/05/2009	< 0.00476	U	< 0.00476	U	< 0.00476	U	< 0.00476	U	< 0.00476	U	< 0.00476	U	< 0.00476	U	< 0.00476	U
MWA-6R	Shallow	MWA-6R-081109	08/11/2009	< 0.0238	U	< 0.0238	U	< 0.0238	U	< 0.0238	U	< 0.0238	U	< 0.0238	U	< 0.0238	U	< 0.0238	U
MWA-7(I)	Intermediate	MWA-7(I)-081409	08/14/2009	< 0.0191	U	< 0.0191	U	< 0.0191	U	< 0.0191	U	< 0.0191	U	< 0.0191	U	< 0.0191	U	< 0.0191	U
MWA-8I	Intermediate	MWA-8I-080609	08/06/2009	< 0.00952	U	< 0.00952	U	< 0.00952	U	< 0.00952	U	< 0.00952	U	< 0.00952	U	< 0.00952	U	< 0.00952	U
MWA-9I	Intermediate	MWA-9I-081109	08/11/2009	< 0.120	U	< 0.120	U	< 0.120	U	< 0.120	U	< 0.120	U	< 0.120	U	< 0.120	U	< 0.120	U
MWA-10I	Intermediate	MWA-10I-081109	08/11/2009	< 0.0240	U	< 0.0240	U	< 0.0240	U	< 0.0240	U	< 0.0240	U	< 0.0240	U	< 0.0240	U	< 0.0240	U
MWA-11I(D)	Deep	MWA-11I-081909	08/19/2009	< 0.0240	U	< 0.0240	U	< 0.0240	U	< 0.0240	U	< 0.0240	U	< 0.0240	U	< 0.0240	U	< 0.0240	U
MWA-12I(D)	Deep	MWA-12I(D)-081409	08/14/2009	< 0.00948	UT	< 0.00948	UT	< 0.00948	UT	< 0.00948	UT	< 0.00948	UT	< 0.00948	UT	< 0.00948	UT	< 0.00948	UT
MWA-13D	Deep	MWA-13D-081009	08/10/2009	< 0.0240	U	< 0.0240	U	< 0.0240	U	< 0.0240	U	< 0.0240	U	< 0.0240	U	< 0.0240	U	< 0.0240	U
MWA-14I(D)	Deep	MWA-14I(D)-080509	08/05/2009	< 0.00476	U	< 0.00476	U	< 0.00476	U	< 0.00476	U	< 0.00476	U	< 0.00476	U	< 0.00476	U	< 0.00476	U
MWA-15R	Shallow	MWA-15R-081909	08/19/2009	< 1.92	U	< 1.44	U	< 0.481	U	< 0.962	U	< 3.37	U	< 0.481	U	< 3.37	U	**2.54**	
MWA-15R*	Shallow	MWA-15R-090309	09/03/2009	< 1.05	U	< 2.11	U	< 1.05	U	< 2.11	U	< 2.11	U	< 1.05	U	< 7.37	U	< 4.21	U
MWA-16I	Intermediate	MWA-16I-081109	08/11/2009	< 0.00966	U	< 0.00966	U	< 0.00966	U	< 0.00966	U	< 0.00966	U	< 0.00966	U	< 0.00966	U	< 0.00966	U
MWA-17SI	Shallow	MWA-17SI-081009	08/10/2009	< 0.238	U	< 0.238	U	< 0.238	U	< 0.476	U	< 0.238	U	< 0.238	U	< 0.238	U	< 0.238	U
MWA-18	Shallow	MWA-18-081009	08/10/2009	< 0.00488	U	< 0.00488	U	< 0.00488	U	< 0.00488	U	< 0.00488	U	< 0.00488	U	< 0.00488	U	< 0.00488	U
MWA-19	Shallow	MWA-19-081009	08/10/2009	< 0.0476	U	< 0.0476	U	< 0.0476	U	< 0.0476	U	< 0.0476	U	< 0.0476	U	< 0.0476	U	< 0.0476	U
MWA-20	Shallow	MWA-20-081709	08/17/2009	< 0.00476	U	< 0.00476	U	< 0.00476	U	< 0.00476	U	< 0.00476	U	< 0.00476	U	< 0.00476	U	< 0.00476	U
MWA-22	Shallow	MWA-22-081909	08/19/2009	< 0.0240	U	< 0.0962	U	< 0.0240	U	< 0.0240	U	< 0.0240	U	< 0.0240	U	< 0.0240	U	< 0.0240	U
MWA-29	Shallow	MWA-29-080609	08/06/2009	< 0.00476	U	< 0.00476	U	< 0.00476	U	< 0.00476	U	< 0.00476	U	< 0.00476	U	< 0.00476	U	< 0.00476	U
MWA-30	Shallow	MWA-30-081009	08/10/2009	< 0.00943	U	< 0.00943	U	< 0.00943	U	< 0.00943	U	< 0.00943	U	< 0.00472	U	< 0.00943	U	< 0.00472	U
MWA-31I(D)	Deep	MWA-31I(D)-081009	08/10/2009	< 0.00476	U	< 0.00476	U	< 0.00476	U	< 0.00476	U	< 0.00476	U	< 0.00476	U	< 0.00476	U	< 0.00476	U
MWA-32I	Intermediate	MWA-32I-081009	08/10/2009	< 0.0240	U	< 0.0240	U	< 0.0240	U	< 0.0240	U	< 0.0240	U	< 0.0240	U	< 0.0240	U	< 0.0240	U
MWA-33	Shallow	MWA-33-080509	08/05/2009	< 0.0190	U	< 0.0190	U	< 0.0190	U	< 0.0190	U	< 0.0190	U	< 0.0190	U	< 0.0190	U	< 0.0190	U
MWA-34I	Intermediate	MWA-34I-081109	08/11/2009	< 0.0100	U	< 0.0100	U	< 0.0100	U	< 0.0100	U	< 0.0100	U	< 0.0100	U	< 0.0100	U	< 0.0100	U
MWA-42	Shallow	MWA-42-081709	08/17/2009	< 0.0238	U	< 0.0238	U	< 0.0238	U	< 0.0238	U	< 0.0238	U	< 0.0238	U	< 0.0238	U	< 0.0238	U
MWA-44	Shallow	MWA-44-081109	08/11/2009	< 0.0240	U	< 0.0240	U	< 0.0240	U	< 0.0240	U	< 0.0240	U	< 0.0240	U	< 0.0240	U	< 0.0240	U
MWA-45	Shallow	MWA-45-081709	08/17/2009	< 0.00476	U	< 0.00476	U	< 0.00476	U	< 0.00476	U	< 0.00476	U	< 0.00476	U	< 0.00476	U	< 0.00476	U
MWA-46	Shallow	MWA-46-081009	08/10/2009	< 0.0481	U	< 0.0481	U	< 0.0481	U	< 0.0481	U	< 0.0481	U	< 0.0481	U	< 0.0481	U	< 0.0481	U
MWA-47	Shallow	MWA-47-080609	08/06/2009	< 0.0238	U	< 0.0238	U	< 0.0238	U	< 0.0476	U	< 0.0238	U	< 0.0238	U	< 0.0238	U	< 0.0238	U
MWA-49I	Intermediate	MWA-49I-081009	08/10/2009	< 0.0240	U	< 0.0240	U	< 0.0240	U	< 0.0240	U	< 0.0240	U	< 0.0240	U	< 0.0240	U	< 0.0240	U
MWA-50I	Intermediate	MWA-50I-080609	08/06/2009	< 0.00476	U	< 0.00476	U	< 0.00476	U	< 0.00476	U	< 0.00476	U	< 0.00476	U	< 0.00476	U	< 0.00476	U
MWA-51I	Intermediate	MWA-51I-081009	08/10/2009	< 0.0240	U	< 0.0240	U	< 0.0240	U	< 0.0240	U	< 0.0240	U	< 0.0240	U	< 0.0240	U	< 0.0240	U
MWA-54I	Intermediate	MWA-54I-081909	08/19/2009	< 0.00952	UT	< 0.00952	UT	< 0.00952	UJT	< 0.00952	UT	< 0.00952	UJT	< 0.00952	UT	< 0.00952	UT	< 0.00952	UT
MWA-55I	Intermediate	MWA-55I-081709	08/17/2009	< 0.0476	U	< 0.0476	U	< 0.0476	U	< 0.0476	U	< 0.0476	U	< 0.0476	U	< 0.0476	U	< 0.0476	U
MWA-56D	Deep	MWA-56D-081009	08/10/2009	< 0.00488	U	< 0.00488	U	< 0.00488	U	< 0.00488	U	< 0.00488	U	< 0.00488	U	< 0.00488	U	< 0.00976	U
MWA-57D	Deep	MWA-57D-081709	08/17/2009	< 0.00476	U	< 0.00476	U	< 0.00476	U	< 0.00476	U	< 0.00476	U	< 0.00476	U	< 0.00476	U	< 0.00476	U
MWA-58D	Deep	MWA-58D-081009	08/10/2009	< 0.00943	U	< 0.00472	U	< 0.00472	U	< 0.00472	U	< 0.00472	U	< 0.00472	U	< 0.00472	U	< 0.0142	U
MWA-59D	Deep	MWA-59D-080609	08/06/2009	< 0.00478	U	< 0.00478	U	< 0.00478	U	< 0.00478	U	< 0.00478	U	< 0.00478	U	< 0.00478	U	< 0.00478	U
MWA-60	Shallow	MWA-60-080509	08/05/2009	< 0.0190	U	< 0.0190	U	< 0.0190	U	< 0.0190	U	< 0.0190	U	< 0.0190	U	< 0.0190	U	< 0.0190	U
MWA-61	Shallow	MWA-61-081009	08/10/2009	< 0.119	U	< 0.119	U	< 0.119	U	< 0.119	U	< 0.119	U	< 0.119	U	< 0.119	U	< 0.476	U
MWA-62	Shallow	MWA-62-081709	08/17/2009	< 0.192	U	< 0.192	U	< 0.192	U	< 0.192	U	< 0.192	U	< 0.192	U	< 0.192	U	**0.701**	J
MWA-63	Shallow	MWA-63-080509	08/05/2009	< 0.00476	U	< 0.00476	U	< 0.00476	U	< 0.00476	U	< 0.00476	U	< 0.00476	U	< 0.00476	U	< 0.00476	U
MWA-64I	Intermediate	MWA-64I-080609	08/06/2009	< 0.0238	U	< 0.0238	U	< 0.0238	U	< 0.0238	U	< 0.0238	U	< 0.0238	U	< 0.0238	U	< 0.0238	U
MWA-65I	Intermediate	MWA-65I-081709	08/17/2009	< 0.0476	U	< 0.0476	U	< 0.0476	U	< 0.0476	U	< 0.0476	U	< 0.0476	U	< 0.0476	U	**0.196**	
MWA-66I	Intermediate	MWA-66I-081109	08/11/2009	< 0.00485	U	< 0.00485	U	< 0.00485	U	< 0.00485	U	< 0.00485	U	< 0.00485	U	< 0.00485	U	< 0.0437	U
MWA-67SI	Shallow	MWA-67SI-080609	08/06/2009	< 0.190	U	< 0.476	U	< 0.286	U	< 0.381	U	< 0.190	U	< 0.190	U	< 0.190	U	< 0.476	U
MWA-68SI	Shallow	MWA-68SI-081109	08/11/2009	< 0.120	U	< 0.120	U	< 0.120	U	< 0.120	U	< 0.120	U	< 0.120	U	< 0.120	U	< 1.20	U
MWA-69	Shallow	MWA-69-081109	08/11/2009	< 1.2	UT	< 1.43	UT	< 0.481	UT	< 0.481	UT	< 0.481	UT	< 0.481	UT	< 0.952	UT	**0.546**	JT
MWA-69*	Shallow	MWA-69-090309	09/03/2009	< 0.286	U	< 0.762	U	< 0.0952	U	< 0.476	U	< 0.381	U	< 0.0952	U	< 0.190	U	< 0.286	U
MWA-71	Shallow	MWA-71-080709	08/07/2009	< 0.00478	U	< 0.00478	U	< 0.00478	U	< 0.00478	U	< 0.00478	U	< 0.00478	U	< 0.00478	U	< 0.00478	U
MWA-72	Shallow	MWA-72-081709	08/17/2009	< 0.00476	U	< 0.00476	U	**0.00483**	J	< 0.00476	U	< 0.00476	U	< 0.00476	U	< 0.00476	U	< 0.00476	U
MWA-73	Shallow	MWA-73-081409	08/14/2009	< 0.00980	U	< 0.00980	U	< 0.00980	U	< 0.00980	U	< 0.00980	U	< 0.00980	U	< 0.00980	U	< 0.00980	U
MWA-74I	Intermediate	MWA-74I-080709	08/07/2009	< 0.00957	U	< 0.00957	U	< 0.00957	U	< 0.00957	U	< 0.00957	U	< 0.00957	U	< 0.00957	U	< 0.00957	U
MWA-75I	Intermediate	MWA-75I-1-081409	08/14/2009	< 0.00490	U	< 0.00490	U	< 0.00490	U	< 0.00490	U	< 0.00490	U	< 0.00490	U	< 0.00490	U	< 0.00490	U
MWA-75I	Intermediate	MWA-75I-2-081409	08/14/2009	< 0.00488	U	< 0.00488	U	< 0.00488	U	< 0.00488	U	< 0.00488	U	< 0.00488	U	< 0.00488	U	< 0.00488	U
MWA-76G	Gravel	MWA-76G-080709	08/07/2009	< 0.00490	U	< 0.00490	U	< 0.00490	U	< 0.00490	U	< 0.00490	U	< 0.00490	U	< 0.00490	U	< 0.00490	U
MWA-77G	Gravel	MWA-77G-081709	08/17/2009	< 0.00476	U	< 0.00476	U	< 0.00476	U	< 0.00476	U	< 0.00476	U	< 0.00476	U	< 0.00476	U	< 0.00476	U
NMP-3D	Shallow	NMP-3D-081909	08/19/2009	< 0.385	UT	< 0.385	UT	< 0.385	UT	< 0.577	UT	< 0.385	UT	< 0.385	UT	< 0.385	UT	< 0.385	UT
NMP-4D	Shallow	NMP-4D-081909	08/19/2009	< 0.971	U	< 1.94	U	**0.767**	J	< 0.971	U	< 1.46	U	< 0.485	U	< 0.971	U	< 0.971	U
PMP-4	Shallow	PMP-4-081109	08/11/2009	< 0.120	U	< 0.120	U	< 0.120	U	< 0.120	U	< 0.120	U	< 0.120	U	< 0.120	U	< 0.120	U
PMP-6	Shallow	PMP-6-081109	08/11/2009	< 0.240	U	< 0.240	U	< 0.240	U	< 0.240	U	< 0.240	U	< 0.240	U	< 0.240	U	**0.643**	
PMP-5	Shallow	PMP-5-081109	08/11/2009	< 0.240	U	< 0.962	U	< 0.240	U	< 0.240	U	< 0.240	U	< 0.240	U	< 0.240	U	< 0.481	U
RP-02-49	Intermediate	RP-02-49-081309	08/13/2009	< 0.00962	U	< 0.00962	U	< 0.00962	U	< 0.00962	U	< 0.00962	U	< 0.00962	U	< 0.00962	U	< 0.00962	U
RP-02-66	Basalt	RP-02-66-081309	08/13/2009	< 0.00952	U	< 0.00952	U	< 0.00952	U	< 0.00952	U	< 0.00952	U	< 0.00952	U	< 0.00952	U	< 0.00952	U
RP-08-23	Shallow	RP-08-23-081309	08/13/2009	< 0.00952	U	< 0.00952	U	< 0.00952	U	< 0.00952	U	< 0.00952	U	< 0.00952	U	< 0.00952	U	< 0.00952	U
RP-08-80	Intermediate	RP-08-80-081309	08/13/2009	< 0.00957	U	< 0.0287	U	< 0.00957	U	< 0.00957	U	< 0.00957	U	< 0.00957	U	< 0.00957	U	< 0.00957	U
RP-08-107	Basalt	RP-08-107-081309	08/13/2009	< 0.0192	U	< 0.0288	U	< 0.00962	U	< 0.00962	U	< 0.00962	U	< 0.00962	U	< 0.0192	U	< 0.00962	U
RP-09-35	Shallow	RP-09-35-081209	08/12/2009	< 0.00481	U	< 0.00481	U	< 0.00481	U	< 0.00481	U	< 0.00481	U	< 0.00481	U	< 0.0144	U	< 0.00962	U
RP-09-47	Intermediate	RP-09-47-081209	08/12/2009	< 0.00481	U	< 0.00481	U	< 0.00481	U	< 0.00481	U	< 0.00481	U	< 0.00481	U	< 0.00481	U	< 0.00481	U
RP-09-64	Basalt	RP-09-64-081209	08/12/2009	< 0.00952	UT	< 0.00952	UT	< 0.00952	UT	< 0.00952	UT	< 0.00952	UT	< 0.00952	UT	< 0.00952	UT	< 0.00952	UT
RP-10-30	Shallow	RP-10-30-081209	08/12/2009	< 0.00976	UJ	< 0.00488	UJ	< 0.00488	UJ	< 0.00488	UJ	< 0.00488	UJ	< 0.00488	UJ	< 0.00976	UJ	< 0.00488	UJ
RP-10-60	Intermediate	RP-10-60-081209	08/12/2009	< 0.0192	UJ	< 0.00481	UJ	< 0.00481	UJ	< 0.00481	UJ	< 0.00481	UJ	< 0.00481	UJ	< 0.00481	UJ	< 0.00481	UJ
RP-10-97	Gravel	RP-10-97-081209	08/12/2009	< 0.00513	UJ	< 0.00513	UJ	< 0.00513	UJ	< 0.00513	UJ	< 0.00513	UJ	< 0.00513	UJ	< 0.00513	UJ	< 0.00513	UJ
RP-10-130	Basalt	RP-10-130-081209	08/12/2009	< 0.00500	UJ	< 0.00500	UJ	< 0.00500	UJ	< 0.00500	UJ	< 0.00500	UJ	< 0.00500	UJ	< 0.00500	UJ	< 0.00500	UJ
RP-13-11	Intermediate	RP-13-11-081809	08/18/2009	< 0.00962	U	< 0.00962	U	< 0.00962	U	< 0.00962	U	< 0.00962	U	< 0.00962	U	< 0.00962	U	< 0.00962	U
RP-13-22	Intermediate	RP-13-22-081809	08/18/2009	< 0.00962	U	< 0.00962	U	< 0.00962	U	< 0.00962	U	< 0.00962	U	< 0.00962	U	< 0.00962	U	< 0.00962	U
RP-13-33	Gravel	RP-13-33-081809	08/18/2009	< 0.00962	U	< 0.00962	U	< 0.00962	U	< 0.0385	U	< 0.00962	U	< 0.00962	U	< 0.00962	U	< 0.00962	U
RP-13-43	Basalt	RP-13-43-081809	08/18/2009	< 0.00976	U	< 0.00976	U	< 0.00976	U	< 0.00976	U	< 0.00976	U	< 0.00976	U	< 0.00976	U	< 0.00976	U
RP-14-26	Intermediate	RP-14-26-081809	08/18/2009	< 0.00481	U	< 0.00481	U	< 0.00481	U	< 0.00481	U	< 0.00481	U	< 0.00481	U	< 0.00481	U	< 0.00481	U
RP-14-39	Gravel	RP-14-39-081809	08/18/2009	< 0.00476	U	< 0.00476	U	< 0.00476	U	< 0.00476	U	< 0.00476	U	< 0.00476	U	< 0.00476	U	< 0.00476	U
W-19-D	Basalt	W-19-D-081409	08/14/2009	< 0.00952	U	< 0.00952	U	< 0.00952	U	< 0.00952	U	< 0.00952	U	< 0.00952	U	< 0.0190	U	< 0.00952	U
W-19-I	Deep	W-19-I-081409	08/14/2009	< 0.00976	U	< 0.00976	U	< 0.00976	U	< 0.00976	U	< 0.00976	U	< 0.00976	U	< 0.00976	U	< 0.00976	U

Table 3
Pesticide and Herbicide Results
August 2009 Sitewide Groundwater Monitoring
Arkema, Inc. Facility
Portland, Oregon

Wells	Aquifer	Sample ID	Sample Date	Heptachlor epoxide ug/l		Lindane ug/l		Methoxychlor ug/l		Total Chlordanes ug/l		Total Endosulfan ug/l		2,4,5-TP (Silvex) ug/l		2,4-D ug/l	
MWA-2	Shallow	MWA-2-080609	08/06/2009	< 0.190	U	< 0.190	U	< 0.190	U	< 0.19	UA	< 0.19	UT				
MWA-3	Shallow	MWA-3-081009	08/10/2009	< 0.0240	U	**0.0976**		< 0.0240	U	< 0.0962	UA	< 0.0962	UT				
MWA-4	Shallow	MWA-4-081109	08/11/2009	< 0.238	U	< 0.476	U	< 0.238	U	< 0.952	UA	< 0.952	UT				
MWA-5	Shallow	MWA-5-080509	08/05/2009	< 0.00476	U	< 0.00476	U	< 0.00476	U	< 0.00952	UA	< 0.00952	UT				
MWA-6R	Shallow	MWA-6R-081109	08/11/2009	< 0.0238	U	< 0.0238	U	< 0.0238	U	< 0.0952	UA	< 0.0952	UT				
MWA-7(I)	Intermediate	MWA-7(I)-081409	08/14/2009	< 0.0191	U	< 0.0191	U	< 0.0191	U	< 0.0383	UA	< 0.0383	UT				
MWA-8I	Intermediate	MWA-8I-080609	08/06/2009	< 0.00952	U	< 0.00952	U	< 0.00952	U	< 0.019	UA	< 0.019	UT				
MWA-9I	Intermediate	MWA-9I-081109	08/11/2009	< 0.120	U	< 0.120	U	< 0.120	U	< 0.481	UA	< 0.481	UT				
MWA-10I	Intermediate	MWA-10I-081109	08/11/2009	< 0.0240	U	< 0.0240	U	< 0.0240	U	< 0.0962	UA	< 0.0962	UT				
MWA-11I(D)	Deep	MWA-11I-081909	08/19/2009	< 0.0240	U	< 0.0240	U	< 0.0240	U	< 0.0962	UA	< 0.0962	UT				
MWA-12I(D)	Deep	MWA-12I(D)-081409	08/14/2009	< 0.00948	UT	< 0.00948	UT	< 0.00948	UT	< 0.00948	UA	< 0.00948	UT				
MWA-13D	Deep	MWA-13D-081009	08/10/2009	< 0.0240	U	< 0.0240	U	< 0.0240	U	< 0.0962	UA	< 0.0962	UT				
MWA-14I(D)	Deep	MWA-14I(D)-080509	08/05/2009	< 0.00476	U	< 0.00476	U	< 0.00476	U	< 0.00952	UA	< 0.00952	UT				
MWA-15R	Shallow	MWA-15R-081909	08/19/2009	< 0.481	U	**0.683**	J	< 0.962	U	< 3.37	UA	< 1.92	UT				
MWA-15R*	Shallow	MWA-15R-090309	09/03/2009	< 1.05	U	< 1.05	U	< 2.11	U	< 7.37	UA	< 2.11	UT				
MWA-16I	Intermediate	MWA-16I-081109	08/11/2009	< 0.00966	U	< 0.00966	U	< 0.00966	U	< 0.0193	UA	< 0.0193	UT				
MWA-17SI	Shallow	MWA-17SI-081009	08/10/2009	< 0.238	U	**0.431**	J	< 0.238	U	< 0.952	UA	< 0.952	UT				
MWA-18	Shallow	MWA-18-081009	08/10/2009	< 0.00488	U	< 0.00488	U	< 0.00488	U	< 0.00976	UA	< 0.00976	UT				
MWA-19	Shallow	MWA-19-081009	08/10/2009	< 0.0476	U	< 0.0476	U	< 0.0476	U	< 0.19	UA	< 0.19	UT				
MWA-20	Shallow	MWA-20-081709	08/17/2009	< 0.00476	U	< 0.00476	U	< 0.00476	U	< 0.00952	UA	< 0.00952	UT				
MWA-22	Shallow	MWA-22-081909	08/19/2009	< 0.0240	U	< 0.0240	U	< 0.0240	U	< 0.0962	UA	< 0.0962	UT				
MWA-29	Shallow	MWA-29-080609	08/06/2009	< 0.00476	U	< 0.00952	U	< 0.00476	U	< 0.00952	UA	< 0.00952	UT				
MWA-30	Shallow	MWA-30-081009	08/10/2009	< 0.00472	U	< 0.00943	U	< 0.0189	U	< 0.00943	UA	< 0.00943	UT				
MWA-31I(D)	Deep	MWA-31I(D)-081009	08/10/2009	< 0.00476	U	< 0.00476	U	< 0.00476	U	< 0.00952	UA	< 0.00952	UT				
MWA-32I	Intermediate	MWA-32I-081009	08/10/2009	< 0.0240	U	< 0.0240	U	< 0.0240	U	< 0.0962	UA	< 0.0962	UT				
MWA-33	Shallow	MWA-33-080509	08/05/2009	< 0.0190	U	< 0.0190	U	< 0.0190	U	< 0.0952	UA	< 0.0952	UT				
MWA-34I	Intermediate	MWA-34I-081109	08/11/2009	< 0.0100	U	< 0.0100	U	< 0.0100	U	< 0.02	UA	< 0.02	UT				
MWA-42	Shallow	MWA-42-081709	08/17/2009	< 0.0238	U	< 0.0238	U	< 0.0238	U	< 0.0952	UA	< 0.0952	UT				
MWA-44	Shallow	MWA-44-081109	08/11/2009	< 0.0240	U	< 0.0240	U	< 0.0240	U	< 0.0962	UA	< 0.0962	UT				
MWA-45	Shallow	MWA-45-081709	08/17/2009	< 0.00476	U	< 0.00476	U	< 0.00476	U	< 0.00952	UA	< 0.00952	UT				
MWA-46	Shallow	MWA-46-081009	08/10/2009	< 0.0481	U	< 0.0481	U	< 0.0481	U	< 0.192	UA	< 0.192	UT				
MWA-47	Shallow	MWA-47-080609	08/06/2009	< 0.0238	U	< 0.0238	U	< 0.0238	U	< 0.0952	UA	< 0.0952	UT				
MWA-49I	Intermediate	MWA-49I-081009	08/10/2009	< 0.0240	U	< 0.0240	U	< 0.0240	U	< 0.0962	UA	< 0.0962	UT				
MWA-50I	Intermediate	MWA-50I-080609	08/06/2009	< 0.00476	U	< 0.00476	U	< 0.00476	U	< 0.00952	UA	< 0.00952	UT				
MWA-51I	Intermediate	MWA-51I-081009	08/10/2009	< 0.0240	U	< 0.0240	U	< 0.0240	U	< 0.0962	UA	< 0.0962	UT				
MWA-54I	Intermediate	MWA-54I-081909	08/19/2009	< 0.00952	UT	< 0.00952	UT	< 0.00952	UT	< 0.00952	UA	< 0.00952	UJT				
MWA-55I	Intermediate	MWA-55I-081709	08/17/2009	< 0.0476	U	< 0.0476	U	< 0.0476	U	< 0.0952	UA	< 0.0952	UT				
MWA-56D	Deep	MWA-56D-081009	08/10/2009	< 0.00976	U	< 0.00976	U	< 0.00488	U	< 0.00976	UA	< 0.00976	UT				
MWA-57D	Deep	MWA-57D-081709	08/17/2009	< 0.00476	U	< 0.00476	U	< 0.00476	U	< 0.00952	UA	< 0.00952	UT				
MWA-58D	Deep	MWA-58D-081009	08/10/2009	< 0.00943	U	< 0.0189	U	< 0.00472	U	< 0.00943	UA	< 0.00943	UT				
MWA-59D	Deep	MWA-59D-080609	08/06/2009	< 0.00478	U	< 0.00478	U	< 0.00478	U	< 0.00957	UA	< 0.00957	UT				
MWA-60	Shallow	MWA-60-080509	08/05/2009	< 0.0190	U	< 0.0190	U	< 0.0190	U	< 0.0952	UA	< 0.0952	UT				
MWA-61	Shallow	MWA-61-081009	08/10/2009	< 0.119	U	< 0.238	U	< 0.119	U	< 0.476	UA	< 0.476	UT				
MWA-62	Shallow	MWA-62-081709	08/17/2009	< 0.192	U	< 0.192	U	< 0.192	U	< 0.769	UA	< 0.769	UT				
MWA-63	Shallow	MWA-63-080509	08/05/2009	< 0.00476	U	< 0.00476	U	< 0.00476	U	< 0.00952	UA	< 0.00952	UT				
MWA-64I	Intermediate	MWA-64I-080609	08/06/2009	< 0.0238	U	< 0.0238	U	< 0.0238	U	< 0.0952	UA	< 0.0952	UT				
MWA-65I	Intermediate	MWA-65I-081709	08/17/2009	< 0.0476	U	< 0.0476	U	< 0.0476	U	< 0.19	UA	< 0.19	UT				
MWA-66I	Intermediate	MWA-66I-081109	08/11/2009	< 0.00485	U	< 0.00485	U	< 0.00485	U	< 0.0243	UA	< 0.00971	UT				
MWA-67SI	Shallow	MWA-67SI-080609	08/06/2009	< 0.190	U	< 0.286	U	< 0.190	U	< 0.19	UA	< 0.476	UT				
MWA-68SI	Shallow	MWA-68SI-081109	08/11/2009	< 0.120	U	< 0.240	U	< 0.120	U	< 0.481	UA	< 0.481	UT				
MWA-69	Shallow	MWA-69-081109	08/11/2009	< 0.481	UT	< 0.721	UT	< 0.481	UT	< 0.952	UA	< 1.43	UT				
MWA-69*	Shallow	MWA-69-090309	09/03/2009	< 0.0952	U	< 0.571	U	< 0.0952	U	< 0.571	UA	< 0.762	UT				
MWA-71	Shallow	MWA-71-080709	08/07/2009	< 0.00478	U	< 0.00478	U	< 0.00478	U	< 0.00957	UA	< 0.00957	UT	< 0.233	U	< 0.229	U
MWA-72	Shallow	MWA-72-081709	08/17/2009	< 0.00476	U	< 0.00476	U	< 0.00476	U	< 0.00952	UA	**0.00483**	JT	< 0.233	U	< 0.229	U
MWA-73	Shallow	MWA-73-081409	08/14/2009	< 0.00980	U	< 0.00980	U	< 0.00980	U	< 0.0196	UA	< 0.0196	UT	< 0.233	U	< 0.229	U
MWA-74I	Intermediate	MWA-74I-080709	08/07/2009	< 0.00957	U	< 0.00957	U	< 0.00957	U	< 0.0191	UA	< 0.0191	UT	< 0.233	U	< 0.229	U
MWA-75I	Intermediate	MWA-75I-1-081409	08/14/2009	< 0.00490	U	< 0.00490	U	< 0.00490	U	< 0.0098	UA	< 0.0098	UT	< 0.233	U	< 0.229	U
MWA-75I	Intermediate	MWA-75I-2-081409	08/14/2009	< 0.00488	U	< 0.00488	U	< 0.00488	U	< 0.00976	UA	< 0.00976	UT	< 1	UT	< 1	UT
MWA-76G	Gravel	MWA-76G-080709	08/07/2009	< 0.00490	U	< 0.00490	U	< 0.00490	U	< 0.0098	UA	< 0.0098	UT	< 0.233	U	< 0.229	U
MWA-77G	Gravel	MWA-77G-081709	08/17/2009	< 0.00476	U	< 0.00476	U	< 0.00476	U	< 0.00952	UA	< 0.00952	UT	< 0.233	U	< 0.229	U
NMP-3D	Shallow	NMP-3D-081909	08/19/2009	< 0.385	UT	< 0.385	UT	< 0.385	UT	< 0.385	UA	< 0.385	UT				
NMP-4D	Shallow	NMP-4D-081909	08/19/2009	< 0.485	U	< 0.485	U	< 0.971	U	< 0.971	UA	**0.767**	JT				
PMP-4	Shallow	PMP-4-081109	08/11/2009	< 0.120	U	< 0.120	U	< 0.120	U	< 0.481	UA	< 0.481	UT				
PMP-6	Shallow	PMP-6-081109	08/11/2009	< 0.240	U	< 0.240	U	< 0.240	U	< 0.962	UA	< 0.962	UT				
PMP-5	Shallow	PMP-5-081109	08/11/2009	< 0.240	U	< 0.240	U	< 0.240	U	< 0.962	UA	< 0.962	UT				
RP-02-49	Intermediate	RP-02-49-081309	08/13/2009	< 0.00962	U	< 0.00962	U	< 0.00962	U	< 0.0192	UA	< 0.0192	UT	**9.99**		< 0.229	U
RP-02-66	Basalt	RP-02-66-081309	08/13/2009	< 0.00952	U	< 0.00952	U	< 0.00952	U	< 0.019	UA	< 0.019	UT	**9.17**		< 0.229	U
RP-08-23	Shallow	RP-08-23-081309	08/13/2009	< 0.00952	U	< 0.00952	U	< 0.0190	U	< 0.019	UA	< 0.019	UT	< 0.233	U	< 0.229	U
RP-08-80	Intermediate	RP-08-80-081309	08/13/2009	< 0.00957	U	< 0.00957	U	< 0.00957	U	< 0.0287	UA	< 0.0287	UT	**27.4**		**0.333**	J
RP-08-107	Basalt	RP-08-107-081309	08/13/2009	< 0.0288	U	< 0.0192	U	< 0.00962	U	< 0.0192	UA	< 0.0288	UT	**45.2**	J	**0.585**	J
RP-09-35	Shallow	RP-09-35-081209	08/12/2009	< 0.00481	U	< 0.00481	U	< 0.0144	U	< 0.0144	UA	< 0.00962	UT	< 0.233	U	**0.486**	J
RP-09-47	Intermediate	RP-09-47-081209	08/12/2009	< 0.00481	U	< 0.00481	U	< 0.00481	U	< 0.00962	UA	< 0.00962	UT	< 0.233	U	< 0.229	U
RP-09-64	Basalt	RP-09-64-081209	08/12/2009	< 0.00952	UT	< 0.00952	UT	< 0.00952	UT	< 0.00952	UA	< 0.00952	UT	< 0.233	U	< 0.229	U
RP-10-30	Shallow	RP-10-30-081209	08/12/2009	< 0.00976	UJ	< 0.00488	UJ	< 0.00488	UJ	**0.025**	JA	< 0.00976	UJT	< 0.233	UJ	< 0.229	UJ
RP-10-60	Intermediate	RP-10-60-081209	08/12/2009	< 0.00962	UJ	< 0.00481	UJ	< 0.00481	UJ	< 0.00962	UJA	< 0.0192	UJT	< 0.233	UJ	< 0.229	UJ
RP-10-97	Gravel	RP-10-97-081209	08/12/2009	< 0.00513	UJ	< 0.00513	UJ	< 0.00513	UJ	< 0.0103	UJA	< 0.0103	UJT	< 0.233	UJ	< 0.229	UJ
RP-10-130	Basalt	RP-10-130-081209	08/12/2009	< 0.00500	UJ	< 0.00500	UJ	< 0.00500	UJ	< 0.01	UJA	< 0.01	UJT	< 0.233	UJ	< 0.229	UJ
RP-13-11	Intermediate	RP-13-11-081809	08/18/2009	< 0.00962	U	< 0.00962	U	< 0.00962	U	< 0.0192	UA	< 0.0192	UT	< 0.233	U	< 0.229	U
RP-13-22	Intermediate	RP-13-22-081809	08/18/2009	< 0.00962	U	< 0.00962	U	< 0.00962	U	< 0.0192	UA	< 0.0192	UT	< 0.233	U	< 0.229	U
RP-13-33	Gravel	RP-13-33-081809	08/18/2009	< 0.00962	U	< 0.00962	U	< 0.00962	U	< 0.0192	UA	< 0.0192	UT	**5.31**		< 0.229	U
RP-13-43	Basalt	RP-13-43-081809	08/18/2009	< 0.00976	U	< 0.00976	U	< 0.00976	U	< 0.0195	UA	< 0.0195	UT	**17.6**		< 0.229	U
RP-14-26	Intermediate	RP-14-26-081809	08/18/2009	< 0.00481	U	< 0.00481	U	< 0.00481	U	< 0.00962	UA	< 0.00962	UT	< 1	UT	< 1	UT
RP-14-39	Gravel	RP-14-39-081809	08/18/2009	< 0.00476	U	< 0.00476	U	< 0.00476	U	< 0.00952	UA	< 0.00952	UT	< 0.233	U	< 0.229	U
W-19-D	Basalt	W-19-D-081409	08/14/2009	< 0.00952	U	< 0.00952	U	< 0.00952	U	< 0.019	UA	< 0.019	UT	**21.1**		< 0.229	U
W-19-I	Deep	W-19-I-081409	08/14/2009	< 0.00976	U	< 0.00976	U	< 0.00976	U	< 0.0195	UA	< 0.0195	UT	< 0.233	U	< 0.229	U

Notes
ug/L = Micrograms per liter
Blank Cell = Not sampled
< = Compound not detected above the method detection limit
DDx = Sum of DDD, DDE, and DDT isomers

Data Qualifiers:
U = compound was not detected above the associated numerical value
J = Estimated value. Analyte detected at a level less than the Reporting Limit (RL).
Ja = Estimated value. Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL).
The user of this data should be aware that this data is of limited reliability.
RL1 = Reporting limit raised due to sample matrix effects.
A = Total value based on limited number of analytes
T = Result derived or selected from >1 reported value.

Table 4
Semivolatile Organic Compounds Results
August 2009 Sitewide Groundwater Monitoring
Arkema, Inc. Facility
Portland, Oregon

Wells	Aquifer	Sample ID	Sample Date	Acenaphthene ug/l	Acenaphthylene ug/l	Anthracene ug/l	Benzo(a)anthracene ug/l	Benzo(a)pyrene ug/l	Benzo(b)fluoranthene ug/l	Benzo(g,h,i)perylene ug/l
MWA-71	Shallow	MWA-71-080709	08/07/2009	< 0.0481 U	< 0.0481 U	< 0.0481 U	< 0.0481 U	< 0.0481 U	< 0.0481 U	< 0.0481 U
MWA-72	Shallow	MWA-72-081709	08/17/2009	< 0.0476 U	< 0.0476 U	< 0.0476 U	< 0.0476 U	< 0.0476 U	< 0.0476 U	< 0.0476 U
MWA-73	Shallow	MWA-73-081409	08/14/2009	< 0.0476 U	< 0.0476 U	< 0.0476 U	< 0.0476 U	< 0.0476 U	< 0.0476 U	< 0.0476 U
MWA-74I	Intermediate	MWA-74I-080709	08/07/2009	< 0.0485 U	< 0.0485 U	< 0.0485 U	< 0.0485 U	< 0.0485 U	< 0.0485 U	< 0.0485 U
MWA-75I	Intermediate	MWA-75I-1-081409	08/14/2009	< 0.0476 U	< 0.0476 U	< 0.0476 U	< 0.0476 U	< 0.0476 U	< 0.0476 U	< 0.0476 U
MWA-75I	Intermediate	MWA-75I-2-081409	08/14/2009	< 0.0952 UT	< 0.0952 UT	< 0.0952 UT	< 0.0952 UT	< 0.0952 UT	< 0.0952 UT	< 0.0952 UT
MWA-76G	Gravel	MWA-76G-080709	08/07/2009	< 0.0481 U	< 0.0481 U	< 0.0481 U	< 0.0481 U	< 0.0481 U	< 0.0481 U	< 0.0481 U
MWA-77G	Gravel	MWA-77G-081709	08/17/2009	< 0.0476 U	< 0.0476 U	< 0.0476 U	< 0.0476 U	< 0.0476 U	< 0.0476 U	< 0.0476 U
RP-02-49	Intermediate	RP-02-49-081309	08/13/2009	< 0.0481 U	< 0.0481 U	< 0.0481 U	< 0.0481 U	< 0.0481 U	< 0.0481 U	< 0.0481 U
RP-02-66	Basalt	RP-02-66-081309	08/13/2009	< 0.0481 U	< 0.0481 U	< 0.0481 U	< 0.0481 U	< 0.0481 U	< 0.0481 U	< 0.0481 U
RP-08-23	Shallow	RP-08-23-081309	08/13/2009	< 0.0481 U	< 0.0481 U	< 0.0481 U	< 0.0481 U	< 0.0481 U	< 0.0481 U	< 0.0481 U
RP-08-80	Intermediate	RP-08-80-081309	08/13/2009	< 0.0481 U	< 0.0481 U	< 0.0481 U	< 0.0481 U	< 0.0481 U	< 0.0481 U	< 0.0481 U
RP-08-107	Basalt	RP-08-107-081309	08/13/2009	< 0.0481 U	< 0.0481 U	< 0.0481 U	< 0.0481 U	< 0.0481 U	< 0.0481 U	< 0.0481 U
RP-09-35	Shallow	RP-09-35-081209	08/12/2009	< 0.0476 UJ	< 0.0476 UJ	< 0.0476 UJ	< 0.0476 UJ	< 0.0476 UJ	< 0.0476 UJ	< 0.0476 UJ
RP-09-47	Intermediate	RP-09-47-081209	08/12/2009	< 0.0481 U	< 0.0481 U	< 0.0481 U	< 0.0481 U	< 0.0481 U	< 0.0481 U	< 0.0481 U
RP-09-64	Basalt	RP-09-64-081209	08/12/2009	< 0.0472 U	< 0.0472 U	< 0.0472 U	< 0.0472 U	< 0.0472 U	< 0.0472 U	< 0.0472 U
RP-10-30	Shallow	RP-10-30-081209	08/12/2009	0.131 J	< 0.0476 UJ	< 0.0476 UJ	< 0.0476 UJ	< 0.0476 UJ	< 0.0476 UJ	< 0.0476 UJ
RP-10-60	Intermediate	RP-10-60-081209	08/12/2009	< 0.0481 UJ	< 0.0481 UJ	< 0.0481 UJ	< 0.0481 UJ	< 0.0481 UJ	< 0.0481 UJ	< 0.0481 UJ
RP-10-97	Gravel	RP-10-97-081209	08/12/2009	< 0.0485 UJ	< 0.0485 UJ	< 0.0485 UJ	< 0.0485 UJ	< 0.0485 UJ	< 0.0485 UJ	< 0.0485 UJ
RP-10-130	Basalt	RP-10-130-081209	08/12/2009	< 0.0481 UJ	< 0.0481 UJ	< 0.0481 UJ	< 0.0481 UJ	< 0.0481 UJ	< 0.0481 UJ	< 0.0481 UJ
RP-13-11	Intermediate	RP-13-11-081809	08/18/2009	< 0.0476 U	< 0.0476 U	< 0.0476 U	< 0.0476 U	< 0.0476 U	< 0.0476 U	< 0.0476 U
RP-13-22	Intermediate	RP-13-22-081809	08/18/2009	< 0.0476 U	< 0.0476 U	< 0.0476 U	< 0.0476 U	< 0.0476 U	< 0.0476 U	< 0.0476 U
RP-13-33	Gravel	RP-13-33-081809	08/18/2009	< 0.0952 UT	< 0.0952 UT	< 0.0952 UT	< 0.0952 UT	< 0.0952 UT	< 0.0952 UT	< 0.0952 UT
RP-13-43	Basalt	RP-13-43-081809	08/18/2009	< 0.0485 U	< 0.0485 U	< 0.0485 U	< 0.0485 U	< 0.0485 U	< 0.0485 U	< 0.0485 U
RP-14-26	Intermediate	RP-14-26-081809	08/18/2009	< 0.0476 U	< 0.0476 U	< 0.0476 U	< 0.0476 U	< 0.0476 U	< 0.0476 U	< 0.0476 U
RP-14-39	Gravel	RP-14-39-081809	08/18/2009	< 0.0526 U	< 0.0526 U	< 0.0526 U	< 0.0526 U	< 0.0526 U	< 0.0526 U	< 0.0526 U
W-19-D	Basalt	W-19-D-081409	08/14/2009	< 0.0476 U	< 0.0476 U	< 0.0476 U	< 0.0476 U	< 0.0476 U	< 0.0476 U	< 0.0476 U
W-19-I	Deep	W-19-I-081409	08/14/2009	< 0.0476 U	< 0.0476 U	< 0.0476 U	< 0.0476 U	< 0.0476 U	< 0.0476 U	< 0.0476 U

Table 4
Semivolatile Organic Compounds Results
August 2009 Sitewide Groundwater Monitoring
Arkema, Inc. Facility
Portland, Oregon

Wells	Aquifer	Sample ID	Sample Date	Benzo(k)fluoranthene ug/l	Chrysene ug/l	Dibenz(a,h)anthracene ug/l	Fluoranthene ug/l	Fluorene ug/l	Indeno(1,2,3-cd)pyrene ug/l	Naphthalene ug/l	Phenanthrene ug/l	Pyrene ug/l
MWA-71	Shallow	MWA-71-080709	08/07/2009	< 0.0481 U	< 0.0481 U	< 0.0962 U	< 0.0481 U	< 0.0481 U	< 0.0481 U	< 0.0481 U	< 0.0481 U	0.0510 J
MWA-72	Shallow	MWA-72-081709	08/17/2009	< 0.0476 U	< 0.0476 U	< 0.0952 U	< 0.0476 U	< 0.0476 U	< 0.0476 U	< 0.0476 U	< 0.0476 U	< 0.0476 U
MWA-73	Shallow	MWA-73-081409	08/14/2009	< 0.0476 U	< 0.0476 U	< 0.0952 U	< 0.0476 U	< 0.0476 U	< 0.0476 U	< 0.0476 U	< 0.0476 U	< 0.0476 U
MWA-74I	Intermediate	MWA-74I-080709	08/07/2009	< 0.0485 U	< 0.0485 U	< 0.0971 U	< 0.0485 U	< 0.0485 U	< 0.0485 U	0.0543 J	< 0.0485 U	< 0.0485 U
MWA-75I	Intermediate	MWA-75I-1-081409	08/14/2009	< 0.0476 U	< 0.0476 U	< 0.0952 U	< 0.0476 U	< 0.0476 U	< 0.0476 U	0.0605 J	< 0.0476 U	< 0.0476 U
MWA-75I	Intermediate	MWA-75I-2-081409	08/14/2009	< 0.0952 UT	< 0.0952 UT	< 0.190 UT	< 0.0952 UT	< 0.0952 UT	< 0.0952 UT	< 0.0952 UT	< 0.0952 UT	< 0.0952 UT
MWA-76G	Gravel	MWA-76G-080709	08/07/2009	< 0.0481 U	< 0.0481 U	< 0.0962 U	< 0.0481 U	< 0.0481 U	< 0.0481 U	< 0.0481 U	< 0.0481 U	< 0.0481 U
MWA-77G	Gravel	MWA-77G-081709	08/17/2009	< 0.0476 U	< 0.0476 U	< 0.0952 U	< 0.0476 U	< 0.0476 U	< 0.0476 U	0.0533 J	< 0.0476 U	< 0.0476 U
RP-02-49	Intermediate	RP-02-49-081309	08/13/2009	< 0.0481 U	< 0.0481 U	< 0.0962 U	< 0.0481 U	< 0.0481 U	< 0.0481 U	< 0.192 U	< 0.0481 U	< 0.0481 U
RP-02-66	Basalt	RP-02-66-081309	08/13/2009	< 0.0481 U	< 0.0481 U	< 0.0962 U	< 0.0481 U	< 0.0481 U	< 0.0481 U	< 0.144 U	< 0.0481 U	< 0.0481 U
RP-08-23	Shallow	RP-08-23-081309	08/13/2009	< 0.0481 U	< 0.0481 U	< 0.0962 U	< 0.0481 U	< 0.0481 U	< 0.0481 U	< 0.144 U	< 0.0481 U	0.0664 J
RP-08-80	Intermediate	RP-08-80-081309	08/13/2009	< 0.0481 U	< 0.0481 U	< 0.0962 U	< 0.0481 U	< 0.0481 U	< 0.0481 U	< 0.192 U	< 0.0481 U	< 0.0481 U
RP-08-107	Basalt	RP-08-107-081309	08/13/2009	< 0.0481 U	< 0.0481 U	< 0.0962 U	< 0.0481 U	< 0.0481 U	< 0.0481 U	< 0.385 U	< 0.0481 U	< 0.0481 U
RP-09-35	Shallow	RP-09-35-081209	08/12/2009	< 0.0476 UJ	< 0.0476 UJ	< 0.0952 UJ	0.0552 J	< 0.0476 UJ	< 0.0476 UJ	< 0.0476 UJ	< 0.0476 UJ	0.183 J
RP-09-47	Intermediate	RP-09-47-081209	08/12/2009	< 0.0481 U	< 0.0481 U	< 0.0962 U	< 0.0481 U	< 0.0481 U	< 0.0481 U	< 0.0481 U	< 0.0481 U	< 0.0481 U
RP-09-64	Basalt	RP-09-64-081209	08/12/2009	< 0.0472 U	< 0.0472 U	< 0.0943 U	< 0.0472 U	< 0.0472 U	< 0.0472 U	< 0.0472 U	< 0.0472 U	< 0.0472 U
RP-10-30	Shallow	RP-10-30-081209	08/12/2009	< 0.0476 UJ	< 0.0476 UJ	< 0.0952 UJ	0.0529 J	< 0.0476 UJ	< 0.0476 UJ	< 0.143 UJ	< 0.0476 UJ	0.0636 J
RP-10-60	Intermediate	RP-10-60-081209	08/12/2009	< 0.0481 UJ	< 0.0481 UJ	< 0.0962 UJ	< 0.0481 UJ	< 0.0481 UJ	< 0.0481 UJ	< 0.0481 UJ	< 0.0481 UJ	< 0.0481 UJ
RP-10-97	Gravel	RP-10-97-081209	08/12/2009	< 0.0485 UJ	< 0.0485 UJ	< 0.0971 UJ	< 0.0485 UJ	< 0.0485 UJ	< 0.0485 UJ	< 0.0485 UJ	< 0.0485 UJ	< 0.0485 UJ
RP-10-130	Basalt	RP-10-130-081209	08/12/2009	< 0.0481 UJ	< 0.0481 UJ	< 0.0962 UJ	< 0.0481 UJ	< 0.0481 UJ	< 0.0481 UJ	< 0.0481 UJ	< 0.0481 UJ	< 0.0481 UJ
RP-13-11	Intermediate	RP-13-11-081809	08/18/2009	< 0.0476 U	< 0.0476 U	< 0.0952 U	< 0.0476 U	< 0.0476 U	< 0.0476 U	< 0.0476 U	< 0.0476 U	0.0773 J
RP-13-22	Intermediate	RP-13-22-081809	08/18/2009	< 0.0476 U	< 0.0476 U	< 0.0952 U	< 0.0476 U	< 0.0476 U	< 0.0476 U	< 0.0476 U	< 0.0476 U	< 0.0476 U
RP-13-33	Gravel	RP-13-33-081809	08/18/2009	< 0.0952 UT	< 0.0952 UT	< 0.19 UT	< 0.0952 UT	< 0.0952 UT	< 0.0952 UT	< 0.0952 UT	< 0.0952 UT	< 0.0952 UT
RP-13-43	Basalt	RP-13-43-081809	08/18/2009	< 0.0485 U	< 0.0485 U	< 0.0971 U	< 0.0485 U	< 0.0485 U	< 0.0485 U	< 0.0485 U	< 0.0485 U	< 0.0485 U
RP-14-26	Intermediate	RP-14-26-081809	08/18/2009	< 0.0476 U	< 0.0476 U	< 0.0952 U	0.0625 J	< 0.0476 U	< 0.0476 U	< 0.0952 UT	< 0.0476 U	0.326
RP-14-39	Gravel	RP-14-39-081809	08/18/2009	< 0.0526 U	< 0.0526 U	< 0.105 U	< 0.0526 U	< 0.0526 U	< 0.0526 U	< 0.0526 U	< 0.0526 U	< 0.0526 U
W-19-D	Basalt	W-19-D-081409	08/14/2009	< 0.0476 U	< 0.0476 U	< 0.0952 U	< 0.0476 U	< 0.0476 U	< 0.0476 U	< 0.0952 UT	< 0.0476 U	< 0.0476 U
W-19-I	Deep	W-19-I-081409	08/14/2009	< 0.0476 U	< 0.0476 U	< 0.0952 U	< 0.0476 U	< 0.0476 U	< 0.0476 U	< 0.0476 U	< 0.0476 U	< 0.0476 U

Notes
ug/L = Micrograms per liter
Blank Cell = Not sampled
< = Compound not detected above the method detection limit

Data Qualifiers:
U = compound was not detected above the associated numerical value
J = Estimated value. Analyte detected at a level less than the Reporting Limit (RL).
Ja = Estimated value. Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL). The user of this data should be aware that this data is of limited reliability.
RL1 = Reporting limit raised due to sample matrix effects.
A = Total value based on limited number of analytes
T = Result derived or selected from >1 reported value.

Table 5
Dioxin and Furan Results
August 2009 Sitewide Groundwater Monitoring
Arkema, Inc. Facility
Portland, Oregon

Wells	Aquifer	Sample ID	Sample Date	1,2,3,4,6,7,8-HpCDF pg/l		1,2,3,4,6,7,8-HpCDD pg/l		1,2,3,4,7,8,9-HpCDF pg/l		1,2,3,4,7,8-HxCDD pg/l		1,2,3,4,7,8-HxCDF pg/l		1,2,3,6,7,8-HxCDD pg/l		1,2,3,6,7,8-HxCDF pg/l		1,2,3,7,8,9-HxCDD pg/l		1,2,3,7,8,9-HxCDF pg/l		1,2,3,7,8-PeCDF pg/l		1,2,3,7,8-PeCDD pg/l		2,3,4,6,7,8-HxCDF pg/l	
MWA-7(I)	Intermediate	MWA-7(I)-081409	08/14/2009	**5.9**	J	**15**	J	< 1.1	UJ	< 1.5	U	**7.6**	J	< 1	U	**3.1**	J	< 1	U	**1.7**	J	< 1.3	U	< 1.5	U	< 0.67	U
MWA-12I(D)	Deep	MWA-12I(D)-081409	08/14/2009	< 1.1	UT	**1.35**	JT	**0.94**	JT	< 48	UT	< 1.2	UT	< 48	UT	**0.55**	JT	< 48	UT	**1**	JT	< 1.5	UT	< 48	UT	**0.63**	JT
MWA-71	Shallow	MWA-71-080709	08/07/2009	< 0.45	U	**0.92**	J	< 0.57	U	< 0.58	U	**2.9**	J	< 0.39	U	**0.66**	J	< 0.4	U	< 0.58	U	< 0.39	U	< 1	U	< 0.49	U
MWA-72	Shallow	MWA-72-081709	08/17/2009	< 0.13	U	< 0.62	U	**1.1**	J	**0.52**	J	**1.7**	J	< 0.33	U	< 0.33	U	< 0.34	U	< 0.45	U	< 0.65	U	< 0.64	U	< 0.38	U
MWA-73	Shallow	MWA-73-081409	08/14/2009	< 0.61	U	< 0.91	U	< 0.77	UJ	< 1.2	U	< 0.38	U	< 0.79	U	**0.49**	J	< 0.8	U	< 0.38	U	< 0.93	U	< 1	U	< 0.32	U
MWA-74I	Intermediate	MWA-74I-080709	08/07/2009	**3.4**	J	**4.9**	J	< 0.6	U	< 0.53	U	**2.7**	J	< 0.36	U	< 0.4	U	< 0.36	U	< 0.54	U	< 0.43	U	< 0.99	U	**1**	J
MWA-75I	Intermediate	MWA-75I-1-081409	08/14/2009	< 0.8	U	< 1.2	U	< 1	UJ	< 2	U	< 1	U	< 1.3	U	< 0.76	U	< 1.3	U	< 1	U	< 1.2	U	< 1.4	U	< 0.87	U
MWA-75I	Intermediate	MWA-75I-2-081409	08/14/2009	< 0.52	U	< 0.74	U	**0.94**	J	< 1	U	< 0.4	U	< 0.69	U	**0.52**	J	< 0.7	U	**1.2**	J	< 0.96	U	< 0.96	U	< 0.34	U
MWA-76G	Gravel	MWA-76G-080709	08/07/2009	< 0.33	U	**0.51**	J	< 0.41	U	**0.55**	J	< 0.52	U	**0.37**	J	< 0.38	U	< 0.32	U	< 0.52	U	< 0.52	U	< 0.97	U	**0.47**	J
MWA-77G	Gravel	MWA-77G-081709	08/17/2009	**2.3**	J	< 0.36	U	< 0.14	U	< 0.28	U	< 0.39	U	< 0.19	U	< 0.29	U	< 0.19	U	< 0.39	U	< 0.7	U	< 0.51	U	**0.69**	J
RP-02-49	Intermediate	RP-02-49-081309	08/13/2009	< 0.44	U	< 0.41	U	< 0.56	U	< 0.59	U	**1.8**	J	< 0.4	U	< 0.13	U	< 0.41	U	< 0.17	U	< 0.49	U	< 0.34	U	< 0.14	U
RP-02-66	Basalt	RP-02-66-081309	08/13/2009	**2.3**	J	< 0.16	U	< 0.34	U	< 0.36	U	**2.2**	J	< 0.24	U	< 0.27	U	< 0.25	U	< 0.36	U	**0.72**	J	< 0.45	U	< 0.31	U
RP-08-23	Shallow	RP-08-23-081309	08/13/2009	**4.5**	J	< 0.94	U	**1.8**	J	< 0.62	U	< 0.37	U	< 0.42	U	< 0.28	U	< 0.42	U	< 0.38	U	< 1.1	U	< 0.73	U	< 0.32	U
RP-08-80	Intermediate	RP-08-80-081309	08/13/2009	< 0.032	U	< 0.23	U	< 0.04	U	< 0.22	U	**1**	J	< 0.15	U	< 0.28	U	< 0.15	U	< 0.37	U	< 0.47	U	< 0.54	U	< 0.31	U
RP-08-107	Basalt	RP-08-107-081309	08/13/2009	< 0.21	U	< 0.31	U	< 0.26	U	< 0.11	U	< 0.3	U	< 0.076	U	< 0.22	U	< 0.077	U	**0.42**	J	**0.61**	J	< 0.7	U	< 0.25	U
RP-09-35	Shallow	RP-09-35-081209	08/12/2009	**4.5**	J	**15**	J	**0.83**	J	**1.3**	J	< 0.22	U	**2.1**	J	**1.5**	J	**3.4**	J	**0.32**	J	< 0.58	U	< 0.87	U	< 0.21	U
RP-09-47	Intermediate	RP-09-47-081209	08/12/2009	**1.8**	J	< 0.43	U	**0.3**	J	< 0.24	U	< 0.22	U	< 0.2	U	< 0.19	U	< 0.2	U	< 0.23	U	< 0.35	U	< 0.43	U	**1.1**	J
RP-09-64	Basalt	RP-09-64-081209	08/12/2009	**1.3**	J	**0.39**	J	**0.41**	J	< 0.23	U	< 0.17	U	< 0.19	U	< 0.16	U	< 0.19	U	**0.2**	J	< 0.36	U	< 0.32	U	**0.98**	J
RP-10-30	Shallow	RP-10-30-081209	08/12/2009	< 0.17	U	< 0.33	U	**0.52**	J	< 0.29	UJ	< 0.2	U	< 0.23	UJ	**0.62**	J	< 0.24	UJ	**0.34**	J	< 0.46	U	< 0.5	UJ	**1.3**	J
RP-10-60	Intermediate	RP-10-60-081209	08/12/2009	**1.8**	J	**1.1**	J	**0.9**	J	**0.35**	J	< 0.17	U	**0.28**	J	**0.75**	J	< 0.25	UJ	**0.32**	J	< 0.43	U	< 0.46	UJ	**1.2**	J
RP-10-97	Gravel	RP-10-97-081209	08/12/2009	**1.8**	J	< 0.57	U	**0.5**	J	< 0.4	UJ	< 0.35	U	< 0.33	UJ	< 0.31	U	< 0.34	UJ	< 0.37	UJ	< 0.52	U	< 0.51	UJ	**1.3**	J
RP-10-130	Basalt	RP-10-130-081209	08/12/2009	< 0.2	U	< 0.55	U	**0.8**	J	**0.54**	J	< 0.23	U	**0.31**	J	**0.75**	J	**0.35**	J	**0.48**	J	< 0.45	U	< 0.53	UJ	**1.4**	J
RP-13-11	Intermediate	RP-13-11-081809	08/18/2009	< 0.69	U	**2.3**	J	**2**	J	< 1.9	U	< 1.1	U	< 1.3	U	**1.1**	J	< 1.3	U	**1.1**	J	**2.1**	J	< 3.4	U	**1.5**	J
RP-13-22	Intermediate	RP-13-22-081809	08/18/2009	**2**	J	**2.1**	J	**0.54**	J	< 1.7	U	< 1	U	< 1.1	U	< 0.75	U	< 1.2	U	< 1	U	**1.4**	J	< 2.3	U	< 0.85	U
RP-13-33	Gravel	RP-13-33-081809	08/18/2009	**4.5**	J	**6.1**	J	**4.3**	J	**4.1**	J	< 1.2	U	**2.9**	J	**4.8**	J	**2.8**	J	**3.1**	J	**3.5**	J	< 3.7	U	**4.5**	J
RP-13-43	Basalt	RP-13-43-081809	08/18/2009	**2.2**	J	**1.3**	J	**1.1**	J	< 2	U	< 1.1	U	< 1.4	U	**0.89**	J	< 1.4	U	< 1.1	U	**1.7**	J	< 4	U	**1**	J
RP-14-26	Intermediate	RP-14-26-081809	08/18/2009	**3**	JT	**8.6**	JT	**1.8**	JT	**1.2**	JT	< 2.7	UT	**1.7**	JT	**1.3**	JT	**2.4**	JT	**2.2**	JT	**1.7**	JT	< 49	UT	**1.75**	JT
RP-14-39	Gravel	RP-14-39-081809	08/18/2009	< 0.61	U	< 0.92	U	< 0.77	U	< 1.9	U	< 1.1	U	< 1.3	U	< 0.82	U	< 1.3	U	< 1.1	U	< 1.3	U	< 3.1	U	< 0.94	U
W-19-D	Basalt	W-19-D-081409	08/14/2009	< 0.43	U	< 0.83	U	< 0.55	UJ	< 1.2	U	< 0.71	U	< 0.79	U	< 0.53	U	< 0.8	U	< 0.72	U	< 1.5	U	< 1.6	U	< 0.6	U
W-19-I	Deep	W-19-I-081409	08/14/2009	< 0.41	U	< 0.94	U	< 0.52	UJ	< 0.92	U	< 0.48	U	< 0.62	U	**0.91**	J	< 0.63	U	**1.5**	J	< 1.1	U	< 1.1	U	< 0.41	U

Table 5
Dioxin and Furan Results
August 2009 Sitewide Groundwater Monitoring
Arkema, Inc. Facility
Portland, Oregon

Wells	Aquifer	Sample ID	Sample Date	2,3,4,7,8-PeCDF pg/l	2,3,7,8-TCDF pg/l	2,3,7,8-TCDD pg/l	OCDF pg/l	OCDD pg/l	HpCDF homologs pg/l	HpCDD homologs pg/l	HxCDF homologs pg/l	HxCDD homologs pg/l	PeCDF homologs pg/l	PeCDD homologs pg/l	TCDF homologs pg/l	TCDD homologs pg/l	Total PCDD/F pg/l	TCDD TEQ pg/l
MWA-7(I)	Intermediate	MWA-7(I)-081409	08/14/2009	< 1.3 U	5.3	< 0.91 U	16 J	160	13 J	28 J	18 J	1.8	11 J	< 1.5 U	10	< 0.91 U	258 JT	2.03 JT
MWA-12I(D)	Deep	MWA-12I(D)-081409	08/14/2009	< 48 UT	< 3.4 UT	< 9.6 UT	< 96 UT	7.95 JT	2.85 JT	2.8 JT	4.2 JT	< 48 UT	2.7 JT	< 48 UT	6.6 JT	< 9.6 UT	27.1 JT	0.243 JT
MWA-71	Shallow	MWA-71-080709	08/07/2009	< 0.4 U	1.3 J	< 0.43 U	1.1 J	< 1.3 U	4.2 J	2.5 J	9.4 J	< 0.58 U	7 J	< 1 U	1.3 J	< 0.43 U	25.5 JT	0.496 JT
MWA-72	Shallow	MWA-72-081709	08/17/2009	< 0.66 U	< 1.1 U	< 0.38 U	< 0.55 U	< 0.3 U	5.1 J	3.8 J	9.8 J	0.52 J	< 1.6 U	< 0.64 U	< 1.1 U	< 0.38 U	19.2 JT	0.233 JT
MWA-73	Shallow	MWA-73-081409	08/14/2009	< 0.96 U	< 1.7 U	< 0.62 U	< 2.1 U	2.3 J	< 0.77 U	< 0.91 U	4.6 J	< 0.91 U	< 1.8 U	< 1 U	< 1.7 U	< 0.62 U	6.9 JT	0.0497 JT
MWA-74I	Intermediate	MWA-74I-080709	08/07/2009	0.98 J	1.5 J	< 0.33 U	5.7 J	40 J	11 J	8.9 J	10 J	< 0.53 U	6.5 J	< 0.99 U	1.5 J	0.43	84 JT	0.911 JT
MWA-75I	Intermediate	MWA-75I-1-081409	08/14/2009	< 1.2 U	< 2 U	< 0.77 U	< 3.5 U	< 4.9 U	< 1 U	< 1.2 U	< 1 U	< 1.2 U	4.3 J	< 1.4 U	< 2 U	< 0.77 U	4.3 JT	< 49 UT
MWA-75I	Intermediate	MWA-75I-2-081409	08/14/2009	< 0.98 U	< 1.4 U	< 0.64 U	< 2.1 U	< 2.2 U	2.5 J	0.97	4.9 J	< 1 U	< 1.6 U	< 0.96 U	< 1.4 U	< 0.64 U	8.37 JT	0.181 JT
MWA-76G	Gravel	MWA-76G-080709	08/07/2009	0.67 J	1.3 J	< 0.34 U	< 1.1 U	3.1 J	3 J	1.2 J	7.4 J	1.2 J	5.7 J	< 0.97 U	1.3 J	< 0.34 U	22.9 JT	0.476 JT
MWA-77G	Gravel	MWA-77G-081709	08/17/2009	< 0.72 U	< 0.97 U	< 0.3 U	1.2 J	< 0.22 U	5 J	1.5 J	8.5 J	< 0.28 U	0.73	< 0.51 U	< 0.97 U	< 0.3 U	16.9 JT	0.0924 JT
RP-02-49	Intermediate	RP-02-49-081309	08/13/2009	< 0.5 U	< 0.76 U	< 0.2 U	< 0.41 U	< 0.42 U	8.8 J	1.7 J	10 J	< 0.59 U	< 0.98 U	< 0.34 U	< 0.76 U	< 0.2 U	20.5 JT	0.18 JT
RP-02-66	Basalt	RP-02-66-081309	08/13/2009	< 0.44 U	< 0.82 U	< 0.46 U	< 0.35 U	< 0.37 U	6.3 J	1.8 J	10 J	< 0.27 U	1.8 J	< 0.45 U	< 0.82 U	< 0.46 U	19.9 JT	0.265 JT
RP-08-23	Shallow	RP-08-23-081309	08/13/2009	< 1.1 U	< 0.92 U	0.46 J	< 0.4 U	< 0.86 U	11 J	43 J	16 J	< 0.47 U	< 1.5 U	< 0.73 U	< 0.92 U	1.5 J	71.5 JT	0.523 JT
RP-08-80	Intermediate	RP-08-80-081309	08/13/2009	< 0.48 U	< 0.98 U	< 0.47 U	< 0.25 U	< 0.2 U	2.4 J	1.4 J	7.6 J	< 0.17 U	< 1.1 U	< 0.54 U	< 0.98 U	< 0.47 U	11.4 JT	0.1 JT
RP-08-107	Basalt	RP-08-107-081309	08/13/2009	< 0.51 U	< 1 U	< 0.14 U	< 0.79 U	< 0.31 U	6 J	< 0.31 U	11 J	< 0.085 U	1.4 J	< 0.7 U	< 1 U	< 0.14 U	18.4 JT	0.0603 JT
RP-09-35	Shallow	RP-09-35-081209	08/12/2009	2.7 J	< 0.35 U	< 0.4 U	< 0.36 U	130	9.6 J	43 J	22 J	36 J	21 J	11	17 J	21	311 JT	1.91 JT
RP-09-47	Intermediate	RP-09-47-081209	08/12/2009	1.7 J	< 0.2 U	< 0.23 U	< 0.28 U	< 0.52 U	3.4 J	1.3 J	11 J	0.59	10 J	< 0.43 U	7 J	< 0.23 U	33.3 JT	0.641 JT
RP-09-64	Basalt	RP-09-64-081209	08/12/2009	1.7 J	< 0.16 U	< 0.24 U	< 0.24 U	< 0.44 U	3.1 J	1.2 J	9.3 J	< 0.23 U	10 J	< 0.32 U	5.5 J	< 0.24 U	27.9 JT	0.649 JT
RP-10-30	Shallow	RP-10-30-081209	08/12/2009	1.3 J	< 0.24 U	< 0.29 UJ	< 0.26 U	< 0.56 U	3.5 J	1.9 J	9.9 J	< 0.29 UJ	9 J	< 0.5 UJ	6.3 J	< 0.29 UJ	30.6 JT	0.621 JT
RP-10-60	Intermediate	RP-10-60-081209	08/12/2009	1.5 J	< 0.18 U	0.28 J	< 0.37 U	< 0.65 U	3.8 J	2.1 J	9.6 J	0.62 J	7.5 J	< 0.46 UJ	5.4 J	0.28 J	29.3 JT	1.06 JT
RP-10-97	Gravel	RP-10-97-081209	08/12/2009	1.8 J	< 0.2 U	< 0.35 UJ	< 0.35 U	< 0.66 U	3.2 J	0.82 J	7.9 J	< 0.4 UJ	8.3 J	< 0.51 UJ	5.9 J	< 0.35 UJ	26.1 JT	0.693 JT
RP-10-130	Basalt	RP-10-130-081209	08/12/2009	1.2 J	< 0.16 U	< 0.28 UJ	< 0.3 U	< 0.68 U	3.2 J	1.2 J	10 J	1.2 J	8.2 J	< 0.53 UJ	6.2 J	< 0.28 UJ	30 JT	0.751 JT
RP-13-11	Intermediate	RP-13-11-081809	08/18/2009	< 1.6 U	< 5.3 U	< 2.4 U	< 3.7 U	< 5.5 U	6.2 J	4 J	9.4 J	< 1.9 U	2.1 J	< 3.4 U	< 5.3 U	< 2.4 U	21.7 JT	0.476 JT
RP-13-22	Intermediate	RP-13-22-081809	08/18/2009	< 1 U	< 4.7 U	< 1.6 U	< 3.4 U	17 J	5.3 J	4.5 J	5.6 J	< 1.7 U	3.8 J	< 2.3 U	< 4.7 U	< 1.6 U	36.2 JT	0.0935 JT
RP-13-33	Gravel	RP-13-33-081809	08/18/2009	3.6 J	< 6.1 U	< 2.9 U	5.3 J	26 J	11 J	9 J	21 J	9 J	7.1 J	< 3.7 U	< 6.1 U	< 2.9 U	88.4 JT	3.56 JT
RP-13-43	Basalt	RP-13-43-081809	08/18/2009	< 1.2 U	< 5.1 U	< 2.7 U	< 5.7 U	< 8 U	5.8 J	2.3 J	8.1 J	< 2 U	3.3 J	< 4 U	< 5.1 U	< 2.7 U	19.5 JT	0.286 JT
RP-14-26	Intermediate	RP-14-26-081809	08/18/2009	1.4 JT	< 9.8 UT	< 9.8 UT	6.1 JT	77 JT	8.55 JT	18.6 JT	12 JT	15.5 JT	3.75 JT	< 49 UT	< 9.8 UT	< 9.8 UT	142 JT	1.68 JT
RP-14-39	Gravel	RP-14-39-081809	08/18/2009	< 1.3 U	< 3.9 U	< 1.8 U	< 4.1 U	12 J	3.5 J	6.3 J	4.4	< 1.9 U	2.5	< 3.1 U	< 3.9 U	< 1.8 U	28.7 JT	0.0036 JT
W-19-D	Basalt	W-19-D-081409	08/14/2009	< 1.5 U	< 1.8 U	< 0.8 U	< 2.1 U	< 2.7 U	2.5 J	< 0.83 U	5 J	< 0.83 U	< 1.9 U	< 1.6 U	< 1.8 U	< 0.8 U	7.5 JT	< 49 UT
W-19-I	Deep	W-19-I-081409	08/14/2009	< 1.1 U	< 1.8 U	< 0.65 U	< 1.9 U	2.6 J	< 0.46 U	< 0.94 U	7 J	< 0.92 U	9.7 J	< 1.1 U	7.8 J	< 0.65 U	27.1 JT	0.242 JT

Notes

pg/L = Picograms per liter
Blank Cell = Not sampled
< = Compound not detected above the method detection limit
TEQ = Toxicity Equivalent Quotient
Total PCDD/F = Sum of dioxin and furan homologs

Data Qualifiers:

U = compound was not detected above the associated numerical value
J = Estimated value. Analyte detected at a level less than the Reporting Limit (RL).
Ja = Estimated value. Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL). The user of this data should be aware that this data is of limited reliability.
RL1 = Reporting limit raised due to sample matrix effects.
A = Total value based on limited number of analytes
T = Result derived or selected from >1 reported value.

Table 6
Total and Dissolved Metals
August 2009 Sitewide Groundwater Monitoring
Arkema, Inc. Facility
Portland, Oregon

Wells	Aquifer	Sample ID	Sample Date	Chromium, VI Comp. N mg/l	Aluminum D mg/l	Aluminum T mg/l	Arsenic D mg/l	Arsenic T mg/l	Cadmium D mg/l	Cadmium T mg/l	Copper, Dusts & mists as Cu D mg/l	Copper, Dusts & mists as Cu T mg/l
MWA-2	Shallow	MWA-2-080609	08/06/2009									
MWA-3	Shallow	MWA-3-081009	08/10/2009									
MWA-4	Shallow	MWA-4-081109	08/11/2009	< 0.0037 UJ								
MWA-5	Shallow	MWA-5-080509	08/05/2009									
MWA-6R	Shallow	MWA-6R-081109	08/11/2009	**0.36** J								
MWA-7(I)	Intermediate	MWA-7(I)-081409	08/14/2009									
MWA-8I	Intermediate	MWA-8I-080609	08/06/2009				**0.0487** J					
MWA-9I	Intermediate	MWA-9I-081109	08/11/2009									
MWA-10I	Intermediate	MWA-10I-081109	08/11/2009	**0.6** J			< 0.00300 U					
MWA-11I(D)	Deep	MWA-11I-081909	08/19/2009	**0.04** J			**0.342**					
MWA-12I(D)	Deep	MWA-12I(D)-081409	08/14/2009				**0.0523**					
MWA-13D	Deep	MWA-13D-081009	08/10/2009									
MWA-14I(D)	Deep	MWA-14I(D)-080509	08/05/2009				**0.0263** J					
MWA-15R	Shallow	MWA-15R-081909	08/19/2009	< 0.0037 UJ			< 0.00300 U					
MWA-16I	Intermediate	MWA-16I-081109	08/11/2009	**1.6** J								
MWA-17SI	Shallow	MWA-17SI-081009	08/10/2009									
MWA-18	Shallow	MWA-18-081009	08/10/2009	**0.34** J								
MWA-19	Shallow	MWA-19-081009	08/10/2009	**0.5** J								
MWA-20	Shallow	MWA-20-081709	08/17/2009	**0.071** JT			**0.0568** J					
MWA-22	Shallow	MWA-22-081909	08/19/2009	**0.048** J			**0.11**					
MWA-23	Shallow	MWA-23-080509	08/05/2009	**0.0047** J			**0.0299** J					
MWA-24	Shallow	MWA-24-080509	08/05/2009	**0.086** J			**0.534**					
MWA-25	Shallow	MWA-25-081909	08/19/2009	**1.1** J			**0.217**					
MWA-26	Shallow	MWA-26-080509	08/05/2009	**0.11**								
MWA-27	Shallow	MWA-27-080509	08/05/2009	**0.3** J								
MWA-28I(D)	Deep	MWA-28I(D)-081909	08/19/2009	< 0.0037 UJ			**0.439**					
MWA-29	Shallow	MWA-29-080609	08/06/2009	< 0.0037 UJ								
MWA-30	Shallow	MWA-30-081009	08/10/2009	**1.1** J			**0.0412** J					
MWA-31I(D)	Deep	MWA-31I(D)-081009	08/10/2009	**9.3** J								
MWA-32I	Intermediate	MWA-32I-081009	08/10/2009	**0.21** J			**0.0218** J					
MWA-33	Shallow	MWA-33-080509	08/05/2009	**0.014** J			**0.0464** J					
MWA-34I	Intermediate	MWA-34I-081109	08/11/2009	< 0.037 UJ			**0.066**					
MWA-35	Shallow	MWA-35-081909	08/19/2009	**0.11** J			**0.0318** J					
MWA-36	Shallow	MWA-36-081909	08/19/2009	**0.43** J			**0.147**					
MWA-37	Shallow	MWA-37-081909	08/19/2009	**0.57** JT			**0.142** T					
MWA-38	Shallow	MWA-38-080509	08/05/2009	**0.49**			**0.0984**					
MWA-39	Shallow	MWA-39-080509	08/05/2009	**0.0042** J								
MWA-40	Shallow	MWA-40-080509	08/05/2009	**0.042** J			**0.0801**					
MWA-41	Shallow	MWA-41-080609	08/06/2009	< 0.0037 UJ								
MWA-42	Shallow	MWA-42-081709	08/17/2009	< 0.0037 UJ			**0.0939** J					
MWA-43	Shallow	MWA-43-080609	08/06/2009	< 0.0037 UJ								
MWA-44	Shallow	MWA-44-081109	08/11/2009	< 0.037 UJ			**0.0373** J					
MWA-45	Shallow	MWA-45-081709	08/17/2009	**0.085** J			**0.0269** J					
MWA-46	Shallow	MWA-46-081009	08/10/2009	< 0.037 UJ								
MWA-47	Shallow	MWA-47-080609	08/06/2009	**0.11** J								
MWA-48I	Intermediate	MWA-48I-081909	08/19/2009	**0.052** J			< 0.00300 U					
MWA-49I	Intermediate	MWA-49I-081009	08/10/2009	< 0.0037 UJ			**0.0101** J					
MWA-50I	Intermediate	MWA-50I-080609	08/06/2009	< 0.0037 U								
MWA-51I	Intermediate	MWA-51I-081009	08/10/2009	< 0.25 UJT			**0.0721** T					
MWA-52I	Intermediate	MWA-52I-081709	08/17/2009	< 0.0037 UJ								
MWA-53I	Intermediate	MWA-53I-080609	08/06/2009	< 0.0037 UJ								
MWA-54I	Intermediate	MWA-54I-081909	08/19/2009	**0.21** J								
MWA-55I	Intermediate	MWA-55I-081709	08/17/2009	**0.34** J			**0.0151** J					
MWA-56D	Deep	MWA-56D-081009	08/10/2009	< 0.0037 UJ								
MWA-57D	Deep	MWA-57D-081709	08/17/2009	< 0.0037 UJ								
MWA-58D	Deep	MWA-58D-081009	08/10/2009	< 0.0037 UJ								
MWA-59D	Deep	MWA-59D-080609	08/06/2009	< 0.0037 U								
MWA-60	Shallow	MWA-60-080509	08/05/2009									
MWA-61	Shallow	MWA-61-081009	08/10/2009									
MWA-62	Shallow	MWA-62-081709	08/17/2009	< 0.0037 UJ			< 0.00300 U					
MWA-63	Shallow	MWA-63-080509	08/05/2009		< 0.0150 U	**0.0321** J	< 0.00300 U	< 0.00300 U	< 0.000300 U	**0.000367** J	**0.00223** J	< 0.00200 U
MWA-64I	Intermediate	MWA-64I-080609	08/06/2009				**0.054**					
MWA-65I	Intermediate	MWA-65I-081709	08/17/2009	< 0.0037 UJ								
MWA-66I	Intermediate	MWA-66I-081109	08/11/2009	< 0.0037 UJ								
MWA-67SI	Shallow	MWA-67SI-080609	08/06/2009				< 0.00300 U					
MWA-68SI	Shallow	MWA-68SI-081109	08/11/2009	< 0.0037 UJ			< 0.00300 U					
MWA-69	Shallow	MWA-69-081109	08/11/2009				< 0.00300 U					
MWA-70I	Intermediate	MWA-70I-080509	08/05/2009	< 0.0037 U								
MWA-71	Shallow	MWA-71-080709	08/07/2009				**0.0106** J	< 0.00300 U				
MWA-72	Shallow	MWA-72-081709	08/17/2009				**0.00719** J					
MWA-73	Shallow	MWA-73-081409	08/14/2009				**0.00499** J					
MWA-74I	Intermediate	MWA-74I-080709	08/07/2009				< 0.00300 U	< 0.00300 U				
MWA-75I	Intermediate	MWA-75I-1-081409	08/14/2009				**0.0187** J					
MWA-75I	Intermediate	MWA-75I-2-081409	08/14/2009				**0.0183** J					
MWA-76G	Gravel	MWA-76G-080709	08/07/2009				**0.00782** J	< 0.00300 U				
MWA-77G	Gravel	MWA-77G-081709	08/17/2009				**0.00585** J					
NMP-3D	Shallow	NMP-3D-081909	08/19/2009									
NMP-4D	Shallow	NMP-4D-081909	08/19/2009									
PMP-4	Shallow	PMP-4-081109	08/11/2009									
PMP-6	Shallow	PMP-6-081109	08/11/2009									
PMP-5	Shallow	PMP-5-081109	08/11/2009									
RP-02-49	Intermediate	RP-02-49-081309	08/13/2009		**0.0177** J	< 0.0150 U	< 0.00300 U	< 0.00300 U	**0.00125** J	**0.00127** J	**0.00285** J	**0.00358** J
RP-02-66	Basalt	RP-02-66-081309	08/13/2009		< 0.0150 U	< 0.0150 U	**0.00631** J	< 0.00300 UJ	**0.000779** J	**0.000958** J	**0.00454** J	**0.00332** J
RP-08-23	Shallow	RP-08-23-081309	08/13/2009				< 0.0150 U	**0.0243** J				
RP-08-80	Intermediate	RP-08-80-081309	08/13/2009				< 0.00300 U	**0.0031** JT				
RP-08-107	Basalt	RP-08-107-081309	08/13/2009				< 0.00300 U	< 0.00300 U				
RP-09-35	Shallow	RP-09-35-081209	08/12/2009				**0.0729** J	**0.126** J				
RP-09-47	Intermediate	RP-09-47-081209	08/12/2009				**0.00962** J	**0.00565** J				
RP-09-64	Basalt	RP-09-64-081209	08/12/2009				**0.00786** J	< 0.00300 UJ				
RP-10-30	Shallow	RP-10-30-081209	08/12/2009				< 0.00300 U	**0.00393** J				
RP-10-60	Intermediate	RP-10-60-081209	08/12/2009				**0.0122** J	**0.00743** J				
RP-10-97	Gravel	RP-10-97-081209	08/12/2009				< 0.00300 U	< 0.00300 U				
RP-10-130	Basalt	RP-10-130-081209	08/12/2009				< 0.00300 U	< 0.00300 U				
RP-13-11	Intermediate	RP-13-11-081809	08/18/2009				**0.0132** J	**0.00878** J				
RP-13-22	Intermediate	RP-13-22-081809	08/18/2009				**0.00634** JT	**0.00313** J				
RP-13-33	Gravel	RP-13-33-081809	08/18/2009				**0.00464** J	< 0.00300 U				
RP-13-43	Basalt	RP-13-43-081809	08/18/2009				**0.00449** J	**0.00358** J				
RP-14-26	Intermediate	RP-14-26-081809	08/18/2009				**0.206** J	**0.203**				
RP-14-39	Gravel	RP-14-39-081809	08/18/2009				**0.229** J	**0.237**				
W-19-D	Basalt	W-19-D-081409	08/14/2009		< 0.0150 U	< 0.0150 U	**0.00551** J	**0.0047** J	**0.000672** J	< 0.000300 UJ	< 0.00200 U	**0.00202** J
W-19-I	Deep	W-19-I-081409	08/14/2009		< 0.1 UT	< 0.1 UT	**0.00578** JT	**0.00591** JT	**0.00052** JT	**0.000538** JT	< 0.00405 UT	**0.00236** JT

Table 6
Total and Dissolved Metals
August 2009 Sitewide Groundwater Monitoring
Arkema, Inc. Facility
Portland, Oregon

Wells	Aquifer	Sample ID	Sample Date	Iron D mg/l	Iron T mg/l	Lead D mg/l	Lead T mg/l	Manganese D mg/l	Manganese T mg/l	Nickel, Metal and other D mg/l	Nickel, Metal and other T mg/l	Perchlorate N ug/l	Zinc D mg/l	Zinc T mg/l
MWA-2	Shallow	MWA-2-080609	08/06/2009	**27.8**				**0.744**				**3.9**		
MWA-3	Shallow	MWA-3-081009	08/10/2009	**0.00483** J								**1240**		
MWA-4	Shallow	MWA-4-081109	08/11/2009									**582**		
MWA-5	Shallow	MWA-5-080509	08/05/2009									< 1.7 U		
MWA-6R	Shallow	MWA-6R-081109	08/11/2009	**2.35**								< 1.7 U		
MWA-7(I)	Intermediate	MWA-7(I)-081409	08/14/2009	**35.3**								< 1.7 U		
MWA-8I	Intermediate	MWA-8I-080609	08/06/2009					**0.0807**				< 1.7 U		
MWA-9I	Intermediate	MWA-9I-081109	08/11/2009									**465**		
MWA-10I	Intermediate	MWA-10I-081109	08/11/2009									< 0.68 U		
MWA-11I(D)	Deep	MWA-11I-081909	08/19/2009									< 0.34 U		
MWA-12I(D)	Deep	MWA-12I(D)-081409	08/14/2009									< 1.7 U		
MWA-13D	Deep	MWA-13D-081009	08/10/2009	**18.8**										
MWA-14I(D)	Deep	MWA-14I(D)-080509	08/05/2009									< 0.68 U		
MWA-15R	Shallow	MWA-15R-081909	08/19/2009	**2.07**										
MWA-16I	Intermediate	MWA-16I-081109	08/11/2009									< 1.7 U		
MWA-17SI	Shallow	MWA-17SI-081009	08/10/2009	**8.8**								**378**		
MWA-18	Shallow	MWA-18-081009	08/10/2009									< 0.34 U		
MWA-19	Shallow	MWA-19-081009	08/10/2009									< 3.4 U		
MWA-20	Shallow	MWA-20-081709	08/17/2009									< 3.4 U		
MWA-22	Shallow	MWA-22-081909	08/19/2009									< 3.4 U		
MWA-23	Shallow	MWA-23-080509	08/05/2009	**3.72**										
MWA-24	Shallow	MWA-24-080509	08/05/2009									**17.9**		
MWA-25	Shallow	MWA-25-081909	08/19/2009	**1.19**								**14900** T		
MWA-26	Shallow	MWA-26-080509	08/05/2009					**0.0718**				**69.5**		
MWA-27	Shallow	MWA-27-080509	08/05/2009	**1.38**								**146**		
MWA-28I(D)	Deep	MWA-28I(D)-081909	08/19/2009									< 0.34 U		
MWA-29	Shallow	MWA-29-080609	08/06/2009									< 1.7 U		
MWA-30	Shallow	MWA-30-081009	08/10/2009	**0.658**				**0.0754**				< 6.8 U		
MWA-31I(D)	Deep	MWA-31I(D)-081009	08/10/2009	**1.24**								**1840**		
MWA-32I	Intermediate	MWA-32I-081009	08/10/2009	**0.288**								**29900**		
MWA-33	Shallow	MWA-33-080509	08/05/2009	**0.542**								< 0.68 U		
MWA-34I	Intermediate	MWA-34I-081109	08/11/2009	**1.33**								< 3.4 U		
MWA-35	Shallow	MWA-35-081909	08/19/2009	**0.341**								**5380**		
MWA-36	Shallow	MWA-36-081909	08/19/2009	**1.29**								**4320**		
MWA-37	Shallow	MWA-37-081909	08/19/2009	**0.805** T								**10500** T		
MWA-38	Shallow	MWA-38-080509	08/05/2009	**1.05**								**8160**		
MWA-39	Shallow	MWA-39-080509	08/05/2009	**0.112**								< 0.68 U		
MWA-40	Shallow	MWA-40-080509	08/05/2009	**0.817**								< 1.7 U		
MWA-41	Shallow	MWA-41-080609	08/06/2009	< 0.00300 U				< 0.0150 U				< 0.34 U		
MWA-42	Shallow	MWA-42-081709	08/17/2009	**0.909**								< 3.4 U		
MWA-43	Shallow	MWA-43-080609	08/06/2009	**0.0549** J				**0.0523**				< 20 UT		
MWA-44	Shallow	MWA-44-081109	08/11/2009	**2.33**				**0.0843**				**55.9**		
MWA-45	Shallow	MWA-45-081709	08/17/2009	**0.877**								**309**		
MWA-46	Shallow	MWA-46-081009	08/10/2009	**2.97**								< 3.4 U		
MWA-47	Shallow	MWA-47-080609	08/06/2009	**0.701**								< 1.7 U		
MWA-48I	Intermediate	MWA-48I-081909	08/19/2009	**0.0511** J				**2.22**				**175000**		
MWA-49I	Intermediate	MWA-49I-081009	08/10/2009	**0.0588** J								**58900**		
MWA-50I	Intermediate	MWA-50I-080609	08/06/2009	**0.0464** J								< 1.7 U		
MWA-51I	Intermediate	MWA-51I-081009	08/10/2009	**10.4** T								< 3.4 U		
MWA-52I	Intermediate	MWA-52I-081709	08/17/2009	**0.0896** J				**0.103**				**2810**		
MWA-53I	Intermediate	MWA-53I-080609	08/06/2009	**33.2**								< 1.7 U		
MWA-54I	Intermediate	MWA-54I-081909	08/19/2009	**0.19** J								< 3.4 U		
MWA-55I	Intermediate	MWA-55I-081709	08/17/2009	**0.385** J								**69100**		
MWA-56D	Deep	MWA-56D-081009	08/10/2009	**0.0115** J								**2140**		
MWA-57D	Deep	MWA-57D-081709	08/17/2009	**0.0103** J								**5070**		
MWA-58D	Deep	MWA-58D-081009	08/10/2009	**0.0167** J								**128000**		
MWA-59D	Deep	MWA-59D-080609	08/06/2009	**0.00711** J								**1670**		
MWA-60	Shallow	MWA-60-080509	08/05/2009	**1.71**				**0.679**				< 0.68 U		
MWA-61	Shallow	MWA-61-081009	08/10/2009	**0.244**								**489**		
MWA-62	Shallow	MWA-62-081709	08/17/2009	**0.089** J								**864**		
MWA-63	Shallow	MWA-63-080509	08/05/2009	**0.0432** J	**0.205**	< 0.00700 U	< 0.00700 U	< 0.0150 U	**0.641**	**0.00495** J	**0.00541** J	< 0.68 U	< 0.00200 U	**0.00225** J
MWA-64I	Intermediate	MWA-64I-080609	08/06/2009	**1.08**								< 3.4 U		
MWA-65I	Intermediate	MWA-65I-081709	08/17/2009	**0.854**										
MWA-66I	Intermediate	MWA-66I-081109	08/11/2009	**0.92**								**1250** T		
MWA-67SI	Shallow	MWA-67SI-080609	08/06/2009	**41.8**				**2.22**				**528**		
MWA-68SI	Shallow	MWA-68SI-081109	08/11/2009	**266**								**12800**		
MWA-69	Shallow	MWA-69-081109	08/11/2009	**115**								< 1.7 U		
MWA-70I	Intermediate	MWA-70I-080509	08/05/2009	**585**								< 1.7 U		
MWA-71	Shallow	MWA-71-080709	08/07/2009											
MWA-72	Shallow	MWA-72-081709	08/17/2009											
MWA-73	Shallow	MWA-73-081409	08/14/2009											
MWA-74I	Intermediate	MWA-74I-080709	08/07/2009											
MWA-75I	Intermediate	MWA-75I-1-081409	08/14/2009											
MWA-75I	Intermediate	MWA-75I-2-081409	08/14/2009											
MWA-76G	Gravel	MWA-76G-080709	08/07/2009											
MWA-77G	Gravel	MWA-77G-081709	08/17/2009											
NMP-3D	Shallow	NMP-3D-081909	08/19/2009	**2.11**										
NMP-4D	Shallow	NMP-4D-081909	08/19/2009	**18.7**										
PMP-4	Shallow	PMP-4-081109	08/11/2009	**0.0695** J										
PMP-6	Shallow	PMP-6-081109	08/11/2009	**1.35**										
PMP-5	Shallow	PMP-5-081109	08/11/2009	**0.864**										
RP-02-49	Intermediate	RP-02-49-081309	08/13/2009	**0.0857** J	**0.0991** J	< 0.00700 U	< 0.00700 U	**9.05**	**9.1**	**0.027** J	**0.0289** J		**0.00641** J	**0.00768** J
RP-02-66	Basalt	RP-02-66-081309	08/13/2009	**0.0219** J	**0.0221** J	< 0.00700 U	< 0.00700 U	**0.871**	**0.84**	**0.00726** J	**0.00683** J		< 0.00200 U	< 0.00200 U
RP-08-23	Shallow	RP-08-23-081309	08/13/2009											
RP-08-80	Intermediate	RP-08-80-081309	08/13/2009											
RP-08-107	Basalt	RP-08-107-081309	08/13/2009											
RP-09-35	Shallow	RP-09-35-081209	08/12/2009									< 6.8 U		
RP-09-47	Intermediate	RP-09-47-081209	08/12/2009											
RP-09-64	Basalt	RP-09-64-081209	08/12/2009											
RP-10-30	Shallow	RP-10-30-081209	08/12/2009											
RP-10-60	Intermediate	RP-10-60-081209	08/12/2009											
RP-10-97	Gravel	RP-10-97-081209	08/12/2009											
RP-10-130	Basalt	RP-10-130-081209	08/12/2009											
RP-13-11	Intermediate	RP-13-11-081809	08/18/2009											
RP-13-22	Intermediate	RP-13-22-081809	08/18/2009											
RP-13-33	Gravel	RP-13-33-081809	08/18/2009											
RP-13-43	Basalt	RP-13-43-081809	08/18/2009											
RP-14-26	Intermediate	RP-14-26-081809	08/18/2009											
RP-14-39	Gravel	RP-14-39-081809	08/18/2009											
W-19-D	Basalt	W-19-D-081409	08/14/2009	< 0.00300 U	< 0.00300 U	< 0.00700 U	< 0.00700 U	**0.531**	**0.58**	**0.00819** J	**0.00799** J		< 0.00200 U	< 0.00200 U
W-19-I	Deep	W-19-I-081409	08/14/2009	**0.0633** JT	**0.128** T	< 0.05 UT	< 0.05 UT	**6.22** T	**6.42** T	**0.0254** JT	**0.0243** JT		< 0.02 UT	< 0.02 UT

Notes
mg/L = Milligrams per liter
Blank Cell = Not sampled
< = Compound not detected above the method detection limit

Data Qualifiers:
U = compound was not detected above the associated numerical value
J = Estimated value. Analyte detected at a level less than the Reporting Limit (RL).
Ja = Estimated value. Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL). The user of this data should be aware that this data is of limited reliability.
RL1 = Reporting limit raised due to sample matrix effects.
A = Total value based on limited number of analytes
T = Result derived or selected from >1 reported value.

Table 7
Additional Compound Results
August 2009 Sitewide Groundwater Monitoring
Arkema, Inc. Facility
Portland, Oregon

Wells	Aquifer	Sample ID	Sample Date	Methane ug/l		Chloride mg/l		Perchlorate ug/l		Diesel Range Hydrocarbons mg/l		Petroleum hydrocarbons > C26 mg/l	
MWA-2	Shallow	MWA-2-080609	08/06/2009	**5.38**		**340**		**3.9**					
MWA-3	Shallow	MWA-3-081009	08/10/2009	**3.48**	J	**147**		**1240**					
MWA-4	Shallow	MWA-4-081109	08/11/2009			**200**		**582**					
MWA-5	Shallow	MWA-5-080509	08/05/2009			**152**		< 1.7	U				
MWA-6R	Shallow	MWA-6R-081109	08/11/2009	**381**		**2520**		< 1.7	U				
MWA-7(I)	Intermediate	MWA-7(I)-081409	08/14/2009	**13800**	J	**245**		< 1.7	U				
MWA-8I	Intermediate	MWA-8I-080609	08/06/2009			**1020**		< 1.7	U				
MWA-9I	Intermediate	MWA-9I-081109	08/11/2009			**2870**		**465**					
MWA-10I	Intermediate	MWA-10I-081109	08/11/2009			**2160**		< 0.68	U				
MWA-11I(D)	Deep	MWA-11I-081909	08/19/2009			**1090**		< 0.34	U				
MWA-12I(D)	Deep	MWA-12I(D)-081409	08/14/2009			**43.3**		< 1.7	U				
MWA-13D	Deep	MWA-13D-081009	08/10/2009	**5.09**	J	**2550**							
MWA-14I(D)	Deep	MWA-14I(D)-080509	08/05/2009			**2590**		< 0.68	U				
MWA-15R	Shallow	MWA-15R-081909	08/19/2009	**21.7**		**156**							
MWA-16I	Intermediate	MWA-16I-081109	08/11/2009			**2470**		< 1.7	U				
MWA-17SI	Shallow	MWA-17SI-081009	08/10/2009	**31**	J	**1080**		**378**					
MWA-18	Shallow	MWA-18-081009	08/10/2009			**270**		< 0.34	U				
MWA-19	Shallow	MWA-19-081009	08/10/2009			**406**		< 3.4	U				
MWA-20	Shallow	MWA-20-081709	08/17/2009			**164**		< 3.4	U				
MWA-22	Shallow	MWA-22-081909	08/19/2009			**2870**		< 3.4	U				
MWA-23	Shallow	MWA-23-080509	08/05/2009	**59.4**		**13.6**							
MWA-24	Shallow	MWA-24-080509	08/05/2009			**237**		**17.9**					
MWA-25	Shallow	MWA-25-081909	08/19/2009	**27.6**		**469**		**14900**	T				
MWA-26	Shallow	MWA-26-080509	08/05/2009			**107**		**69.5**					
MWA-27	Shallow	MWA-27-080509	08/05/2009	**3.6**		**173**		**146**					
MWA-28I(D)	Deep	MWA-28I(D)-081909	08/19/2009			**5.72**		< 0.34	U				
MWA-29	Shallow	MWA-29-080609	08/06/2009			**3750**		< 1.7	U				
MWA-30	Shallow	MWA-30-081009	08/10/2009	**16**	J	**12900**		< 6.8	U				
MWA-31I(D)	Deep	MWA-31I(D)-081009	08/10/2009			**54300**		**1840**					
MWA-32I	Intermediate	MWA-32I-081009	08/10/2009			**2520**		**29900**					
MWA-33	Shallow	MWA-33-080509	08/05/2009			**929**		< 0.68	U				
MWA-34I	Intermediate	MWA-34I-081109	08/11/2009			**740**		< 3.4	U				
MWA-35	Shallow	MWA-35-081909	08/19/2009			**599**		**5380**					
MWA-36	Shallow	MWA-36-081909	08/19/2009			**263**		**4320**					
MWA-37	Shallow	MWA-37-081909	08/19/2009			**739**		**10500**	T				
MWA-38	Shallow	MWA-38-080509	08/05/2009			**77**		**8160**					
MWA-39	Shallow	MWA-39-080509	08/05/2009			**178**		< 0.68	U				
MWA-40	Shallow	MWA-40-080509	08/05/2009			**220**		< 1.7	U				
MWA-41	Shallow	MWA-41-080609	08/06/2009			**26.3**		< 0.34	U				
MWA-42	Shallow	MWA-42-081709	08/17/2009			**816**		< 3.4	U				
MWA-43	Shallow	MWA-43-080609	08/06/2009			**1710**	T	< 20	UT				
MWA-44	Shallow	MWA-44-081109	08/11/2009			**443**		**55.9**					
MWA-45	Shallow	MWA-45-081709	08/17/2009			**332**		**309**					
MWA-46	Shallow	MWA-46-081009	08/10/2009			**651**		< 3.4	U				
MWA-47	Shallow	MWA-47-080609	08/06/2009			**2110**		< 1.7	U				
MWA-48I	Intermediate	MWA-48I-081909	08/19/2009			**4010**		**175000**					
MWA-49I	Intermediate	MWA-49I-081009	08/10/2009			**7560**		**58900**					
MWA-50I	Intermediate	MWA-50I-080609	08/06/2009			**4550**		< 1.7	U				
MWA-51I	Intermediate	MWA-51I-081009	08/10/2009			**2780**		< 3.4	U				
MWA-52I	Intermediate	MWA-52I-081709	08/17/2009			**1110**		**2810**					
MWA-53I	Intermediate	MWA-53I-080609	08/06/2009			**5980**		< 1.7	U				
MWA-54I	Intermediate	MWA-54I-081909	08/19/2009			**2750**		< 3.4	U				
MWA-55I	Intermediate	MWA-55I-081709	08/17/2009			**2600**		**69100**					
MWA-56D	Deep	MWA-56D-081009	08/10/2009			**22800**		**2140**					
MWA-57D	Deep	MWA-57D-081709	08/17/2009			**15400**		**5070**					
MWA-58D	Deep	MWA-58D-081009	08/10/2009			**33600**		**128000**					
MWA-59D	Deep	MWA-59D-080609	08/06/2009			**37600**		**1670**					
MWA-60	Shallow	MWA-60-080509	08/05/2009			**470**		< 0.68	U				
MWA-61	Shallow	MWA-61-081009	08/10/2009			**473**		**489**					
MWA-62	Shallow	MWA-62-081709	08/17/2009			**34.1**		**864**					
MWA-63	Shallow	MWA-63-080509	08/05/2009			**690**		< 0.68	U				
MWA-64I	Intermediate	MWA-64I-080609	08/06/2009			**1590**		< 3.4	U				
MWA-65I	Intermediate	MWA-65I-081709	08/17/2009			**2220**							
MWA-66I	Intermediate	MWA-66I-081109	08/11/2009			**1720**		**1250**	T				
MWA-67SI	Shallow	MWA-67SI-080609	08/06/2009			**2420**		**528**					
MWA-68SI	Shallow	MWA-68SI-081109	08/11/2009			**355**		**12800**					
MWA-69	Shallow	MWA-69-081109	08/11/2009			**297**		< 1.7	U				
MWA-70I	Intermediate	MWA-70I-080509	08/05/2009			**5200**		< 1.7	U				
MWA-71	Shallow	MWA-71-080709	08/07/2009			**68.1**				**0.144**	J	**0.0278**	J
MWA-72	Shallow	MWA-72-081709	08/17/2009			**18.7**				**0.101**	J	**0.0294**	J
MWA-73	Shallow	MWA-73-081409	08/14/2009			**10.5**				**0.0808**	J	**0.0552**	J
MWA-74I	Intermediate	MWA-74I-080709	08/07/2009			**25.4**				**0.3**	J	**0.203**	J
MWA-75I	Intermediate	MWA-75I-1-081409	08/14/2009			**29.7**				**0.142**	J	**0.0355**	J
MWA-75I	Intermediate	MWA-75I-2-081409	08/14/2009			**29.6**				**0.126**	JT	**0.0442**	JT
MWA-76G	Gravel	MWA-76G-080709	08/07/2009			**42.4**				< 0.0174	U	< 0.0270	U
MWA-77G	Gravel	MWA-77G-081709	08/17/2009			**28.3**				**0.0248**	J	< 0.0267	U
NMP-3D	Shallow	NMP-3D-081909	08/19/2009	**39.4**		**86.5**							
NMP-4D	Shallow	NMP-4D-081909	08/19/2009	**34.5**	T	**1710**	T						
PMP-4	Shallow	PMP-4-081109	08/11/2009			**41.6**	T						
PMP-6	Shallow	PMP-6-081109	08/11/2009			**268**							
PMP-5	Shallow	PMP-5-081109	08/11/2009			**730**							

Table 7
Additional Compound Results
August 2009 Sitewide Groundwater Monitoring
Arkema, Inc. Facility
Portland, Oregon

Wells	Aquifer	Sample ID	Sample Date	Methane ug/l	Chloride mg/l		Perchlorate ug/l		Diesel Range Hydrocarbons mg/l		Petroleum hydrocarbons > C26 mg/l	
RP-02-49	Intermediate	RP-02-49-081309	08/13/2009		**7390**				**0.102**	J	< 0.0267	U
RP-02-66	Basalt	RP-02-66-081309	08/13/2009		**8400**				**0.0725**	J	< 0.0262	U
RP-08-23	Shallow	RP-08-23-081309	08/13/2009		**55.7**	T			**0.12**	J	**0.0342**	J
RP-08-80	Intermediate	RP-08-80-081309	08/13/2009		**2130**	T			**0.0703**	J	< 0.0265	U
RP-08-107	Basalt	RP-08-107-081309	08/13/2009		**796**				**0.0495**	J	< 0.0267	U
RP-09-35	Shallow	RP-09-35-081209	08/12/2009		**405**		< 6.8	U	< 0.0172	U	< 0.0267	UJ
RP-09-47	Intermediate	RP-09-47-081209	08/12/2009		**4120**				< 0.0169	U	< 0.0262	U
RP-09-64	Basalt	RP-09-64-081209	08/12/2009		**3100**				< 0.0170	U	< 0.0265	U
RP-10-30	Shallow	RP-10-30-081209	08/12/2009		**9.56**				**0.192**	J	< 0.0265	UJ
RP-10-60	Intermediate	RP-10-60-081209	08/12/2009		**98.5**				**0.414**	J	**0.496**	J
RP-10-97	Gravel	RP-10-97-081209	08/12/2009		**12.1**				< 0.0172	U	< 0.0267	UJ
RP-10-130	Basalt	RP-10-130-081209	08/12/2009		**79.2**				< 0.0170	U	< 0.0265	UJ
RP-13-11	Intermediate	RP-13-11-081809	08/18/2009		**84**				**0.0292**	J	< 0.0267	U
RP-13-22	Intermediate	RP-13-22-081809	08/18/2009		**194**				**0.0445**	J	**0.0356**	J
RP-13-33	Gravel	RP-13-33-081809	08/18/2009		**907**	JT			**0.106**	JT	**0.0592**	JT
RP-13-43	Basalt	RP-13-43-081809	08/18/2009		**2110**				**0.243**		< 0.0267	U
RP-14-26	Intermediate	RP-14-26-081809	08/18/2009		**494**				**0.13**	J	**0.0664**	J
RP-14-39	Gravel	RP-14-39-081809	08/18/2009		**1420**				**0.0588**	J	**0.0287**	J
W-19-D	Basalt	W-19-D-081409	08/14/2009		**2180**				**0.032**	J	< 0.0267	U
W-19-I	Deep	W-19-I-081409	08/14/2009		**494**				**0.139**	J	**0.0451**	J

Notes
ug/l = Micrograms per liter
mg/L = Milligrams per liter
Blank Cell = Not sampled
< = Compound not detected above the method detection limit

Data Qualifiers:
U = compound was not detected above the associated numerical value
J = Estimated value. Analyte detected at a level less than the Reporting Limit (RL).
Ja = Estimated value. Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL).
The user of this data should be aware that this data is of limited reliability.
A = Total value based on limited number of analytes
T = Result derived or selected from >1 reported value.

Table 8
RCDM Sample Pesticide Detections
August 2009 Sitewide Groundwater Monitoring
Arkema, Inc. Facility
Portland, Oregon

Wells	Aquifer	Sample ID	Sample Date	Sampling Method	4,4-DDD ug/l		4,4-DDE ug/l		4,4-DDT ug/l		DDx ug/l		Heptachlor ug/l		Lindane ug/l	
MWA-15R	Shallow	MWA-15R-081909	08/19/2009	Low Flow	**111**		**21.9**		**702**		**835**	A	**2.54**		**0.683**	J
MWA-15R*	Shallow	MWA-15R-090309	09/03/2009	RCDM Bag	**377**		**52.1**		**5210**		**5640**	A	< 4.21	U	< 1.05	U
MWA-69	Shallow	MWA-69-081109	08/11/2009	Low Flow	**57**	T	**4.06**	T	**66.2**	T	**127**	A	**0.546**	JT	< 0.721	UT
MWA-69*	Shallow	MWA-69-090309	09/03/2009	RCDM Bag	**7.45**		**0.369**		**5.95**		**13.8**	A	< 0.286	U	< 0.571	U
					340%		238%		742%		675%					
					13%		9%		9%		11%					

Notes
* = Sample collected by diffusion bag
ug/L = Micrograms per liter
Blank Cell = Not sampled
< = Compound not detected above the method detection limit
DDx = Sum of DDD, DDE, and DDT isomers

Data Qualifiers:
U = compound was not detected above the associated numerical value
J = Estimated value. Analyte detected at a level less than the Reporting Limit (RL).
Ja = Estimated value. Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL).

RL1 = Reporting limit raised due to sample matrix effects.
The user of this data should be aware that this data is of limited reliability.
A = Total value based on limited number of analytes
T = Result derived or selected from >1 reported value.

Appendix A
Field Data Sheets

DUE TO THE LARGE VOLUME, THIS APPENDIX IS INCLUDED AS A SEPARATE ELECTRONIC FILE

Appendix B
Laboratory Analytical Reports

DUE TO THE LARGE VOLUME, THIS APPENDIX IS INCLUDED AS A SEPARATE ELECTRONIC FILE

Appendix C
Data Validation Report

DUE TO THE LARGE VOLUME, THIS APPENDIX IS INCLUDED AS A SEPARATE ELECTRONIC FILE