Supplementary Annual Report for 2011 Interim Status Ground Water Monitoring Information (OAC Rules 3745-65-90 through 94) - Form and Instructions

PLEASE NOTE FOR 2011 SUBMITTAL

The Supplementary Annual Report for 2011 Ground Water Monitoring Information is used to report to the Director of Ohio EPA a site's ground water monitoring activities during the 2011 calendar year. The Annual Report must be submitted by **March 1, 2012**, in accordance with Ohio Administrative Code (OAC) Rules 3745-65-75, 94(A)(2)(b), (A)(2)(c), and (B)(2). Information to be submitted includes the following:

1. Concentrations of indicator parameters as required by OAC Rule 3745-65-92 (B)(3) for each monitoring well.

2. Results of the evaluation of ground water surface elevations required by OAC Rule 3745-65-93(F) for a Detection monitoring program to determine whether OAC Rule 3745-65-91(A) is satisfied and a description of the response to that evaluation.

3. Results of statistical evaluations of the indicator parameters as required by OAC Rule 3745-65-93(B) including the identification of any significant differences from initial background found in upgradient wells in accordance with OAC Rule 3745-65-93(C)(1).

4. A results summary of the any ground water quality assessment (and resamples) required by OAC Rule 3745-65-93(D)(4).

In accordance with OAC Rule 3745-65-75(F), which requires that the annual report shall cover facility activities during the previous year, Ohio EPA also requires the submission of the following:

A list of the all

1. Results of sampling the drinking water supply suitability parameters required by OAC Rule 3745-65-92(B)(1) for the first year when initial background concentrations are being established.

2. Results of water quality parameter analyses required under OAC Rule 3745-65-92(B)(2).

3. Results of analyses of site-specific parameters that have been required by Ohio EPA via an approved closure plan or Administrative order or results of any other evaluations that have been conducted at the option of the owner/operator.

4. Results of ground water surface elevation measurements under assessment ground water monitoring programs.

5. Results of statistical analyses performed on any site-specific parameters.

If you have not yet received monitoring results for all sampling events conducted during the 2011 calendar year, please include the results that you do have in order to meet the March 1st submittal date. Send additional results as they are received. Year 2011 data may be appended to existing 2010 files. If a copy of the 2010 electronic files is needed, contact Ohio EPA, Division of Drinking and Ground Waters at (614) 644-3128.

OAC Rule 3745-65-75 states that the reporting form and instructions supplied by the Director shall be used for the annual report. For the 2011 Report Ohio EPA will utilize an electronic format for all information, including the five complete and accurate dbf files in either Excel (xls) or dbf database formats, submitted on CD.

The five files MUST follow the structural specifications that begin on page 2. The Master Parameter List needed as a reference for the Parameter database file described on page 4 and Adobe Acrobat versions of the Annual Report instructions and forms are available for download or by calling the Reporting, Analysis & Data Management Unit of the Division of Materials and Waste Management at (614) 644-2621. Technical questions should be directed to the Division of Drinking and Ground Water through the owner's/operator's Ohio EPA Division of Materials and Waste Management contact.

Mail a copy of the complete report to:

Ohio EPA
Division of Materials and Waste Management
Lazarus Government Center
50 West Town Street, Suite 700
P.O. Box 1049
Columbus, Ohio 43216-0149

All information requested in the report shall be submitted in an electronic format on a CD. The submittal CD must be labeled with the information shown below to allow for proper tracking:

- Facility Name with 12 digit EPA ID number
- Annual reporting year
- Notation as to whether the data has been compressed
- A list of all the files included on the CD. These must include, at a minimum: FACILITY.DBF, WELLS.DBF, PARAMS.DBF, GWDATA.DBF, and SAMPLING.DBF.

****A complete paper copy of the report and CD shall be sent to the appropriate **District Unit Supervisor, Division of Materials and Waste Management.** Please note this mailing on the copy mailed to Columbus so that duplication can be avoided.

Central District Office - Ohio EPA
Lazarus Government Center
50 West Town Street, Suite 700
P.O. Box 1049
Columbus, Ohio 43216-0149

Northeast District Office - Ohio EPA
2110 East Aurora Road
Twinsburg, Ohio 44087

Northwest District Office - Ohio EPA
347 North Dunbridge Road
Bowling Green, Ohio 43402

Southeast District Office - Ohio EPA
2195 Front Street
Logan, Ohio 43138

Southwest District Office - Ohio EPA
401 East 5th Street
Dayton, Ohio 45402

2011 Interim Status Supplementary Annual Report Form
Ground Water Monitoring Information

If an owner/operator submits **all** the information required in this report (five database files, all narrative and graphic requirements) on a quarterly or semi-annual basis, then the March 1st annual submittal shall consist of a reference to those documents and a CD containing the five database files appended to include data from the whole calendar year (including any past years' background data needed for statistical comparisons and resamples).

Even though some of the data required in the five databases will remain consistent from year to year, because of the relatively small amount of storage space this information takes up on the submitted CD, and the fact that each database is linked with data in the other databases, all of the information on the five databases must be submitted annually. This will allow for easy accessibility to any required information without having to locate a specific CD which contains the sought after information.

SECTION 1 - FACILITY.DBF

The Facility Database File should be submitted by all facilities required by OAC Rule 3745-65-90 to conduct ground water monitoring. The "Size" field represents the general size of the column. "Required" refers to whether that field must be filled in, not whether it must be present in the database file. All fields must be represented and accurate.

Column Header	Type	Size	Required?	Description
NAME	Character	30	Y	Facility Name
FCID	Character	12	Y	RCRA EPA ID for the facility (OHD...)
ADDR1	Character	25	Y	Street address where the facility is located, not the corporate headquarters or mailing address.
ADDR2	Character	25	N	P.O. Box, if one exists for the facility.
CITY	Character	20	Y	City where facility is located, not corporate headquarters
STATE	Character	2	Y	OH
ZIP	Character	9	Y	Zip Code (no hyphens)
PHONE	Character	14	Y	Phone Number
CONTACT	Character	20	Y	Name of the contact person for the facility
SECTION	Character	4	N	USGS Section from Topo Map (Example: Section 21)
TWNSHIP	Character	4	N	USGS Township from Topo Map (Example: Township 9E)
RANGE	Character	4	N	USGS Range from Topo Map (Example: Range 4W)
LATITUDE	Character	10	Y	Facility Latitude (three decimal places with a space for the decimal placement). (35E 14' 27.000" should be listed as 351427 000).
LONGITUDE	Character	10	Y	Facility Longitude (three decimal places with a space for the decimal placement). (86E 6' 54.123" should be listed as 860654 123)
GEOG_ METHOD	Character	2	Y	Lat/Long Method - see below
NUM_WELLS	Numeric	3	Y	Total number of wells entered into database for facility
COUNTY_NAM	Character	16	Y	Name for the County where the facility is located
FIPS_CO	Character	3	N	FIPS County Code - leave blank if you don't know the code.
FIPS_ST	Character	2	N	FIPS State Code - for Ohio it is 39.

GEOGRAPHIC LATITUDE/LONGITUDE METHOD:

D=Digitized from a map or photo
G=Calculated from a USGS 7.5' map
C=Calculated from county center
F=Field Checked with tape measure
P=Digitized from a USGS 7.5'map
R=Calculated from Section/Township
A=Obtained from satellite data
T=Calculated from Universal Transverse Mercator (UTM)
M=Obtained from a manual
S=Surveyed
O=Other

SECTION 2 - WELL.DBF

For the 2011 Annual Report, all owner/operators shall submit a complete WELL.DBF for all wells that are part of the regulated system. Each well in a cluster of nested wells shall be listed separately. Each record (row) in the file describes one well at the facility. For duplicates, field, lab or equipment blanks, complete a row in the spreadsheet labeling the Well ID such as "MW-1Dup" or "LabBlank"**. "**Size" represents the general size of the column. "Required" refers to whether that column must be filled in, not whether it must be present in the database file. All columns must be represented and accurate. Unit symbols such as (') feet or (") inches are assumed and should not be included within the field.

Column Header	Type	Size	Required?	Description
FCID	Character	12	Y	RCRA EPA ID for the facility (OHD...)
WELL_ID	Character	8	Y	Unique well identification number (i.e., MW-10)
DATUM	Character	8	Y	Reference point for elevation data: Mean Sea Level (MSL) or North American Vertical Datum 1988 (NAVD)
DEPTH	Character	10	Y	Most recent total well depth in feet from measuring point used for gwl
TOP_CAS_EL	Character	10	Y	Top of interior casing elevation referenced to DATUM in feet (846)
TOP_SCR_EL	Character	10	Y	Top of screen elevation referenced to DATUM in feet (813)
BOT_SCR_EL	Character	10	Y	Bottom of screen elevation referenced to DATUM in feet (800)
GRAD_POSTN	Character	1	Y	Well Gradient (U= Up; D= Down; S=Side; O= Other; U=Unknown)
CAS_MATERL	Character	10	Y	Inner well casing material: PVC, SS (Stainless Steel), Teflon, ABS, PTFE, Fiber (Epoxy Fiberglass), GalvStl (Galvanized Steel), Other
PIPE_DIA	Character	4	Y	Interior diameter of well casing in inches (4)
COMMENT	Character	110	N	Comment
SURFACE_EL	Character	10	Y	Ground Surface elevation referenced to DATUM in feet
LATITUDE	Character	10	Y	Well Latitude (three decimal places with a space for the decimal placement) (35E 14' 27.000" should be listed as 351427 000)
LONGITUDE	Character	10	Y	Well Longitude (three decimal places with a space for the decimal placement) . (86E 6' 54.123" should be listed as 860654 123)
X_VAR	Character	10	N	Enter X and Y coordinates if required for modeling. No spaces or characters are permitted.
Y_VAR	Character	10	N	
GEOG_METHOD	Character	1	Y	Latitude/Longitude Method Code (see bottom of previous page)
ELEV_METHOD	Character	1	N	Elevation Method Code (A = Differential mode GPS'd; B = absolute mode GPS'd; C = surveyed from benchmark; D = Digitally interpolated from map; E= manually interpolated from a map)
WELL_USE	Character	2	Y	Well Use Code: 1A = Public Water Supply; 1B = Private Water Supply; 1C = Extraction & Treatment; 1D = Irrigation Supply; 1E = Industrial Supply; 1F = Dewatering; 06 = Seismic Monitoring; 07 = Test Hole (uncased); 09 = Tracer (monitoring); **8A = RCRA monitoring**; 8B = Piezometer; 8C = Other Ground Water Observation
WELL_LOG_T	Character	1	Y	Well Log Type Code: -D= Core-record of strata through which borehole passes; F= Drillers-brief record of gross characteristics of strata; M= Geologist-Graphic record of strata from microscopic exam
DATE_INSTL	Date	8	Y	Date Installed (mm/dd/yy)
DPTH_INSTL	Character	10	Y	Well Depth at Installation in feet
GWL_INSTL	Character	10	Y	GW Level at installation referenced to DATUM in feet
DATA_QA_W	Character	1	N	Well QA Code…This Column is NOT IN USE AT THIS TIME.

SECTION 3 - SAMPLING.DBF

Each record (row) in the file describes one sampling date for a given facility during the past calendar year. **If the owner/operator is using past results from a sampling event(s) as background for statistical well comparisons, each of those sampling events must be included as well.** (If the sampling event required three or fewer consecutive days, the owner/operator may report the event as a single date as long as that fact is noted under "Comments"). “Size” represents the general size of the column. “Required” refers to whether that column must be filled in, not whether it must be present in the database file. All columns must be represented and accurate.

Column Header	Type	Size	Required?	Description
FCID	Character	12	Y	RCRA EPA ID for the facility (OHD...)
SAMP_DATE	Date	8	Y	Sampling Date (mm/dd/yy)
SAMP_SCHEM	Character	4	Y	Q=Qtrly; S=Semi-Annually; M = Monthly; O=Other; A=Annual
COMMENT	Character	60	N	Comments (such as resamples)

SECTION 4 - PARAMETER.DBF

Each record (row) describes one parameter being monitored at a given facility. Each parameter sampled during the year should be listed. **The Parameter Code from the Master Parameter List must be used.** The list is available for download from http://epa.ohio.gov/Default.aspx?tabid=4101. “Size” represents the general size of the column. “Required” refers to whether that column must be filled in, not whether it must be present in the database file. All columns must be represented and accurate.

Column Headers	Type	Size	Required?	Description
FCID	Character	12	Y	RCRA EPA ID for the facility (OHD...)
NAME	Character	8	Y	**Parameter Code from Master Parameter List (No Commas)**
REP_CODE	Character	1	N	If Replicates were collected enter a separate line for each with “a”, “b”, “c”, or “ d” in this column.
UNITS	Character	8	Y	Units for display of this parameter (Use default units on Master List)
DET_LMT	Numeric	14,3	Y	Parameter Method Detection Limit (the 14 = total length of column, 3= number of positions to the right of the decimal point that are available) If more than one method detection limit was used during the year, include the highest one.
ACL	Numeric	14,3	N	Alternate Concentration Limit (Allowed by permit/plan only, in default units)
MCL	Numeric	14,3	N	Maximum Concentration Limit (in default units)
CODE	Numeric	3,0	N	Not Required
METH_CODE	Character	5	Y	EPA Analytical Method Code from SW846.

SECTION 5 - GWData.DBF

This file contains the analytical ground water results including any Drinking Water Parameters, Ground Water Quality Parameters, Indicator Parameters, annual Appendix to OAC Rule 3745-54-98 parameters, resamples, blanks, duplicates and site-specific parameters from all RCRA wells or other required sampling points as required for each sampling event. In addition to all parameters sampled, the facility is required to submit the water level measurements for each well for each sampling event in this file. Each record (row) contains one ground water observation from a given facility and well on a specified date for a given parameter. Complete and accurate results for all groundwater monitoring performed during 2011 **and** any **background data from past years used for statistical purposes** including sampling dates and detection limits must be submitted.

Column Headers	Type	Size	Required?	Description
FCID	Character	12	Y	RCRA EPA ID for the facility (OHD...)
WELL_ID	Character	8	Y	Unique well identifier (i.e., MW-1)
PARAMETER	Character	8	Y	Parameter Code from Master List (Do NOT use Commas)
SAMP_DATE	Date	8	Y	Sample collection date (mm/dd/yy)
CHR_DATA	Character	14	Y	Detection Limit (PQL w/characters, ND<) in default units from Master List.
REAL_DATA	Numeric	14,3	Y	Numeric results (14 = total size, 3 = positions allowed to the right of the decimal point). Use default units from Master List.
UNITS	Character	8	Y	Units of observation in default units from Master List.
DUP_CODE	Character	1	N	Enter "D" if sample is a duplicate
REP_CODE	Character	1	N	If Replicates were collected enter a separate line for each with “a”, “b”, “c”, or “ d” in this column.
METH_CODE	Character	5	Y	Approved Analytical Method from SW846
DATA_QUAL	Character	2	N	Measurement Qualifier - See list below

Data Qualifiers found below may be used to indicate any limits to interpretation of the data. Any two codes may be combined.

A = Average value
C = Determined present by GC/EC
D = Value is from a diluted sample
F = Field measurement
J = Estimated value (MDL<x<PQL)
K = Actual value< Reported value
L = Actual value> Reported value
N = Tentatively identified
O = Analysis lost
P = Present but not quantified
R = Rejected - do not use
S = Sample not stored properly
U = Tested but not detected (< MDL)
V = Calculated value
X = Too numerous to count
Y = Sample not filtered
Z = Not suitable for analysis

SECTION 6 - OTHER REQUIRED INFORMATION

Additional information to accompany the five database submittals should include, but not be limited to, the information shown below. The additional information shall be submitted in an electronic format equivalent to the suggested software programs indicated. **Narrative may be written in any word processing program but saved in MicrosoftWord:**

1. Signed Certification Statement per OAC Rule 3745-65-75(J) of the facility’s/consultant’s legal responsibility for accuracy of data, submitted on paper, to read as follows:

   "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.”

2. Ground Water Flow Data:
   - Results of the evaluation of ground water surface elevations required by OAC Rule 3745-65-92(E) and 93(F)
   - A brief description of the ground water flow system. Annual ground water flow direction and rate in the uppermost aquifer as required under OAC Rule 3745-65-93(F), 94(A)(2)(c) or (B)(2)
   - A description of any response necessary to restore compliance with number, location and depth monitoring well requirements of OAC Rule 3745- 65-91(A&B), 93(F) and 94(A)(2)(c) or (B)(2) (i.e., installation of additional wells)

3. Sampling Data:
   - Date, exact place and time of sampling or measurement; individual(s) who performed the sampling or measurement
   - Copies of Chains of Custody & Sample Receipt forms including preservation methods
   - Results of any field analyses
   - A description of problems encountered during sampling or statistical analysis of the data, any deviation from SAP procedures including documentation of parameter omissions during any sampling event.
   - Background data from past years used for statistical purposes including sampling dates and detection limits.

4. Lab Data: (submit either electronically or by hard copy lab sheets)
   - Date(s) analyses were performed and individual(s) who performed the analyses
   - Analytical techniques or methods used
   - Results of such analyses including: duplicate, trip, field and equipment blank data, any dilution, spike, spike duplicate, spike and surrogate recovery % with Control Limits, RPD, lab/method blank
   - **Method detection limit, PQL,** and units of measurement.
   - **Documentation that the MDL was below the MCL**, statistical and/or concentration limit for each parameter
   - Results of any data validations performed with discussion if any data validation issues (qualifiers) were such that the information provided may not be used for compliance requirements.

5. Tables:
   - Statistical information required on TABLE 1 may be submitted by electronic format on CD
   - Any information required under the Detection or Assessment monitoring sections of this report that would be conducive to spreadsheet submittal may be entered on the CD.

6. Maps: In order to meet the requirements of OAC Rule 3745-65-94(A)(2)(c) for reporting results of ground water surface elevations under OAC Rule 3745-65-92(E) & 93(F) , Ohio EPA requires that owner/operators submit a map(s) for each sampling event indicating:
   - Position of the hazardous waste management unit in relation to the monitoring wells
   - Potentiometric maps of all monitored zones for each sampling event, including arrow(s) marking flow direction(s) as evidence that the monitor well samples are representative of upgradient and downgradient water quality at limit of the waste management area as required by OAC Rule 3745-65-91(A)(1&2)
   - Potentiometric maps of all monitored zones for each sampling event, including labeled contours, arrow(s) marking flow direction(s) as evidence that the monitor well samples are representative of the quality of ground water flowing beneath the unit and capable of immediately detecting statistically significant amounts of hazardous waste/ constituents migrating from the unit to the uppermost aquifer per OAC Rule 3745-65-91(A)(2)?
   - Iso-concentration maps for contaminants if the facility is in assessment monitoring.

7. Calculations: If ground water contamination has been determined, provide supporting calculations pertaining to the calculated or measured rates of migration of hazardous waste/constituents during the reporting period.

SECTION 7 - STATISTICAL EVALUATIONS

Interim Status rules allow the Student T and Average Replicate statistical tests to be used. For these tests complete Table 1. With Ohio EPA's consent, alternate statistical methods may be selected from the procedures outlined in the 2009 Unified Guidance for Statistical Analysis of Ground Water Monitoring Data at RCRA Facilities to determine significant changes in ground water quality. If any of these statistical methods have been approved for your facility, please complete Table 2. Statistically significant differences shall be bolded, underlined or readily identified in some other manner in each applicable table. Only owner/operators that have completed collection of the numbers and kinds of samples necessary to establish the background appropriate for the form of statistical test employed need to report this section.

1. Provide evidence that the statistical methods were as specified in the rules, approved plan, or order comparing background data to ground water quality passing the downgradient boundary of the waste management area per OAC Rule 3745-65-93(C)&(D).

2. Provide evidence that the statistical methods were conducted separately for each constituent in each well per OAC Rule 3745-65-93(B).

3. Provide evidence that the statistical methods were appropriate for the distribution of the constituents per OAC Rule 3745-65-93.

4. Provide evidence that the statistical methods were done at a Type 1 error level of .01 for each testing period for individual well comparisons; and .05 for multiple comparisons (with the exception of tolerance, confidence, prediction intervals and control charts) per the Appendix to OAC Rule 3745-65-93.

5. Provide evidence that the statistical methods used accounted for any data below the limit of detection as specified in the rules, closure plan, or order

6. Provide evidence that the statistical methods used included procedures to control or correct for seasonal, spatial and temporal variability, as necessary.

7. Provide evidence that the frequency of conducting the statistical tests to determine where there is statistically significant evidence of contamination was within the time frame specified in the rules, closure plan, or order.

8. Provide determinations as to whether there is a statistically significant increase over the background values for any indicator chemical parameter or hazardous constituent in any well as required under OAC Rule 3745-65-94(A)(2)(b)

9. Provide example calculations and evidence of the statistical methods used.

Ohio EPA requests interpretations of ground water quality data not analyzed statistically also be submitted as part of Section 7 (comments pertaining to applicability of the data to determining whether ground water quality has been affected by facility operations). **This information may be submitted in narrative form (WordPerfect) on the CD.**

TABLE 1

INDICATOR PARAMETERS ONLY

Well #_____ ____ Average Replicate or _____ Student's t-test

Parameter	Reps	pH (S.U.)	Specific Conductance (umhos)	TOC (mg/l)	TOX (mg/l)
First Semi-Annual					
Sample Date _____					
Mean					
Variance					
Background Variance					
t*					
tc					
Significant Difference at 0.01? (Yes or No)					
Second Semi-Annual					
Sample Date _____					
Mean					
Variance					
Background Mean					
t*					
tc					
Significant Difference at 0.01? (Yes or No)					

TABLE 2.

ALTERNATE STATISTICAL METHODS BACKGROUND FORM

Parameter Name _____Statistical Method _____ Sample Date _____

CRITERIA	ENTER WELL NAMES HERE							
Sampling Frequency								
Experimentwise error no less than 0.01 for individual well comparisons?								
Type 1 error no less than 0.05 for Multiple well comparisons?								
Basis of Comparison - Background, Concentration Limit, MCL or ACL?								
# Background Wells in Database								
# Samples in Background Data Base								
Seasonality/Temporal Corrections (method)								
Spatial Corrections (method)?								
% of Total Non-Detects								
Method of Treating Non-Detects								
Normal/LogNormal Distribution?								
Known contamination?								
Number of Retests Allowed								
Prediction Interval								
Confidence Level								
Upper Prediction Limit								
# of Future Observations*								
Confidence Interval								
Lower Confidence Limit								
MCL/ACL/Fixed Standard								
Confidence Level								
On Mean?								
On Upper %?								
Control Chart Type?								
Control Limits								
Number of Retests Allowed								
STATISTICAL SIGNIFICANCE?								

*Number of Future Observation s= # of independent measurements per well between the sampling event and the next time the data must be statistically analyzed.

SECTION 8 - DETECTION GROUND WATER MONITORING

NOTE - Owners or operators of facilities required to establish a detection ground water monitoring program in accordance with OAC Rule 3745-65-90 through 94 shall submit documentation of the following information per the requirement that annual reports must cover all activities during the year. Documentation of any response reporting requirements must be included in narrative/spreadsheet format on CD as part of the annual report or as specified in an approved permit/plan.

1. If this was the first year of monitoring, the annual report GWData.dbf must includes concentrations of the drinking water supply suitability parameters in OAC Rule 3745-54-92(B)(1) and evidence that these values were submitted to the director within 15 days after receiving verification of laboratory results from each quarterly analysis as required during the first year according to OAC Rule 3745-65-94(B)(2)(a).

2. Separately identify any drinking water supply suitability parameters whose concentration or value exceeds their maximum contaminant level listed in Appendix to OAC Rule 3745-65-92 as required by OAC Rule 3745-65-94(B)(2)(a).

3. Include concentrations of water quality (OAC Rule 3745-65-92(B)(2)) and indicator parameters required by OAC Rule 3745-65-92(B)(3), as well as the results of analyses of site-specific parameters that have been required by Ohio EPA via an order/plan/permit including sampling results from quarterly and semi-annual (or as otherwise approved in their plan) sampling during the reporting period at the option of the owner/operator.

4. If hazardous constituents showed statistically significant evidence of contamination in an upgradient well, separately identify these differences in the annual report according to OAC Rules 3745-65-93(C)(1) and 94(A)(2)(b).

5. If hazardous constituents showed statistically significant evidence of contamination in a down gradient well that was verified by resampling under OAC Rule 3745-65-93(C)(2), note whether the owner/operator notified the director within 7 days as required by OAC Rule 3745-65-93(D)(1).

6. If hazardous constituents were confirmed, note that the owner/operator submitted to the director, within 15 days after determination, a Ground Water Quality Assessment plan as required by OAC Rule 3745-65-93(D)(2).

7. If applicable, provide evidence that the owner/operator made a determination as soon as was technically feasible of the rate, extent and concentration of contamination, and that within 15 days of this determination, submitted to the director a report containing an assessment of ground water quality (First Determination Report) under OAC Rule 3745-65-93(D)(5).

8. If applicable, note that the owner/operator notified the director in the first determination report that the detection monitoring program had been reinstated if it was determined, based upon the results of the first determination, that no hazardous waste/constituents have entered the ground water, as required by OAC Rule 3745-65-93(D)(6).

SECTION 9 - ASSESSMENT MONITORING

NOTE - Owners or operators of facilities required to establish an assessment ground water monitoring program in accordance with OAC Rule 3745-65-90 through 94 shall submit documentation of the following information per the requirement that annual reports must cover all activities during the year. Documentation of any response reporting requirements must be included in narrative/spreadsheet format on CD as part of the annual report or as specified in an approved permit/plan. To summarize efforts to determine rate and extent of migration as well as the concentration of the hazardous waste or hazardous waste constituents in the ground water, Ohio EPA considers certain information to always be required and additional information to be necessary under specific circumstances. This information shall be submitted in narrative form on the required CD.

1. Note whether the GWQAP was implemented to determine the rate, extent and concentration of hazardous waste/constituents as required by OAC Rule 3745-65-93(D)(4).

2. If ground water contamination has been determined, provide supporting calculations pertaining to the calculated or measured rates of migration of hazardous waste/constituents during the reporting period included per OAC Rule 3745-65-93(D)(4)(a).

3. Clarify whether the full vertical and horizontal extent of ground water contamination has been fully determined according to OAC Rule 3745-65-93(D)(4)(a).

4. Note any changes in plume boundary configurations or concentrations during the reporting period.

5. Clarify whether the concentrations of hazardous waste or hazardous waste constituents in the ground water had been fully determined according to OAC Rule 3745-65-93(D)(4)(b).

6. If Appendix to OAC Rule 3745-54-98 parameter sampling was performed during the reporting period, include the results in the annual report.

7. Include any additional hydrogeologic information that has been gathered using supporting methodology.

8. Include any data relating to a prior detection program, including any background data being used for statistical determinations.

9. Include results of any statistical comparisons utilized to fulfill the assessment requirements to determine full rate, extent or concentration.

10. If the owner/operator has not fully determined the rate, extent and concentration of contamination at the facility, summarized activities planned in order to meet those standards.

11. As part of the activities conducted at the facility during this calendar year, note whether all other reports otherwise required by OAC Rules 3745-65-90 through 94 were submitted, complete and accurate, as required by OAC Rule 3745-65-77.

12. If applicable, discuss how much contaminated ground water was pumped and where such contaminated media was disposed.

SECTION 10 - EXAMPLES OF THE REQUIRED DATA FILES

FACILITY.DBF

NAME	FCID	ADDR1	ADDR2	CITY	STATE	ZIP	PHONE	CONTACT	SECT
TEST	OHD123456789	123 First St	PO BOX 100	KENT	OH	40000	4401123214	FRED SMITH	21

TWP	RANGE	LATITUDE	LONGITUDE	GEOG_ METHOD	NUM_WELLS	COUNTY NAME	FIPS_CO	FIPS_ST
‘9E	**‘4W**	410842 435	812203 321	S	5	PORTAGE	133	39

WELL.DBF

FCID	WELL_ID	DATUM	DEPTH	TOP_CAS_ EL	TOP_SCR_E L	BOT_SCR_ EL	GRAD_POSTN	CAS_MATERL
OHD123456789	MW-6	MSL	65	865	808	798	D	SS
OHD123456789	MW-9	MSL	57	853	803	793	U	SS
OHD123456789	DupMW6							
OHD123456789	FBlank							

PIPE_DIA	COMMENT	SURFACE_EL	LATITUDE	LONGITUDE	X_VAR	Y_VAR	GEOG_METHOD
2	bent	866.01	405327 449	805151 094			S
2	good	849.75	405332 945	805145 985			S
	Duplicate						
	Field Blank						

ELEV_METHOD	WELL_ USE	WELL_LOG_T	DATE_INSTL	DPTH_INSTL	GWL_INSTL	DATA_QA_W
	8A	F	02/29/91	65.1	821.06	
	8A	F	02/29/91	68.2	818.89	
	8C					
	8C					

PARAMS.DBF

FCID	NAME	REP_	UNITS	DET	ACL	MCL	CODE	METH_CODE
OHD123456789	Cond F	b	umhos/cm					9050
OHD123456789	GWL		feet					
OHD123456789	pH F	c	SU					
OHD123456789	Temp F		F					
OHD123456789	TOC	a	mg/l					9060
OHD123456789	TOC	b	mg/l					9060
OHD123456789	TOX		ppb	3.000				9022
OHD123456789	111Tri		ppb	3.000		200		8240

SAMPLING.DBF

FCID	SAMP_DATE	SAMP_SCHEM	COMMENT
OHD123456789	6/1/06	Q	Second Quarterly sampling event for 2006.
OHD123456789	9/24/06	Q	Third Quarterly sampling event of 2006.
OHD123456789	12/28/06	Q	Fourth Quarterly sampling event for 2006.
OHD123456789	6/1/07	S	First semi-annual sampling event of 2007
OHD123456789	12/8/07	S	Second Semi-Annual sampling event for 2007.
OHD123456789	7/26/08	O	Assessment sampling due to statistical trip.
OHD123456789	6/14/08	S	First semi-annual sampling event of 2008
OHD123456789	12/21/08	S	Second Semi-Annual sampling event for 2008.
OHD123456789	3/12/09	S	First semi-annual sampling event of 2011
OHD123456789	4/17/09	O	Resampling of MW-6 & MW-7 due to 3/12/09 Cr false positive
OHD123456789	9/24/09	S	Second Semi-Annual sampling event for 2009.

GWDATA.DBF

FCID	WELL_ID	PARAM	SAMP_ DATE	CHR_ DATA	REAL_ DATA	UNITS	DUP_ CODE	REP_ CODE	METH_ CODE	DATA_QUAL
OHD123456789	MW-10	Cond F	9/24/09	1520.000	1520.000	umhos/cm				
OHD123456789	MW-6	Cond F	9/24/09	1550.000	1550.000	umhos/cm				
OHD123456789	MW-10	GWL	9/24/09	819.470	819.470	feet				
OHD123456789	MW-6	GWL	9/24/09	820.090	820.090	feet				
OHD123456789	MW-10	pH F	9/24/09	6.400	6.400	SU				
OHD123456789	MW-6	pH F	9/24/09	6.400	6.400	SU				J
OHD123456789	MW-8	Temp F	9/24/09	57.000	57.000	F				
OHD123456789	MW-9	Temp F	9/24/09	58.000	58.000	F				
OHD123456789	MW-10	TOC	9/24/09	2200.000	2200.000	mg/l				
OHD123456789	MW-6	TOC	9/24/09	2200.000	2200.000	mg/l				
OHD123456789	MW-10	TOC	9/24/09	ND<5.000	0.000	ppb	D			
OHD123456789	MW-9	TOX	9/24/09	ND<5.000	0.000	ppb				
OHD123456789	MW-8	111Tri	9/24/09	ND<5.000	3.451	ppb			8260	J