



PB97-964101
EPA/541/R-97/028
November 1997

EPA Superfund
Record of Decision:

Reilly Tar & Chemical Company Site,
(Dover Plant),
Dover, OH
3/31/1997



RECORD OF DECISION DECLARATION FINAL ACTION REMEDIAL

Reilly Tar and Chemical Company Site Dover, Ohio

Site Name and Location

The Reilly Tar and Chemical Company site is a 3.66 acre parcel of land situated in Dover, Ohio, on Third Street, southeast of the junction of State Route 211 and State Route 39, three-quarters of a mile north of the junction of Sugar Creek and the Tuscarawas River. Current land use adjacent to the study area is mainly commercial and residential north of the site toward the Dover downtown area, and industrial to the west and southwest.

Statement and Basis of Purpose

This decision document represents the selected final remedial action for the Reilly Tar and Chemical Company site. This action was developed pursuant to the Comprehensive environmental Response, Compensation, and Liability Act of 1980 ("CERCLA"), as amended by the Superfund Amendments and Reauthorization Act of 1986 ("SARA"), and the National Contingency Plan ("NCP"). This decision is based on the administrative record for the Reilly Tar and Chemical Company site. The Ohio Environmental Protection Agency has indicated verbally that they concur with the selected remedy. A letter of concurrence is expected by April 4, 1997.

Assessment of the Site

Actual threatened releases of hazardous substances from the site, if not addressed by implementing the remedial action selected in this Record of Decision, may present an imminent and substantial endangerment to public health, welfare, or the environment.

Description of the Remedy

The selected remedy, Alternative 3, includes:

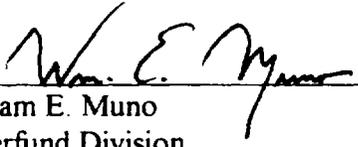
- Institutional controls to completely restrict the use of groundwater on-site and to restrict the property to industrial/commercial use;
- Excavation and off-site thermal treatment of drainage ditch and river sediments, surface soils and impacted perched zone material from the collection trench installation contaminated with greater than 100 ppm Benzo(a)Pyrene-Total Equivalent ("B(a)P-TE"),

- Excavation and on-site disposal of surface water drainage ditch and river sediments, surface soils and impacted perched zone material contaminated with less than 100 ppm B(a)P-TE, and greater than 5 ppm B(a)P-TE;
- Construction of an Ohio Subtitle D Solid Waste Cover over on-site disposed materials; a soil cover over the remainder of the site;
- Off-site disposal of solidified tarry materials, or recycle of tarry materials as a fuel or feedstock;
- Hydraulic control and collection of perched ground water;
- Natural attenuation/long-term monitoring of shallow ground water.
- Sampling and analysis of sediments in the river to monitor ecological risk to aquatic species.

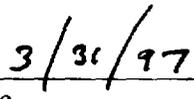
Statutory Determinations

The final remedy is protective of human health and the environment, complies with Federal and State requirements that are legally applicable or relevant and appropriate to the remedial action, and is cost-effective. This remedy utilizes permanent solutions and alternative treatment technologies to the maximum practicable. The selected alternative also satisfies the preference for treatment as a principal element.

Because this remedy will result in hazardous substances remaining on-site, a review will be conducted to ensure that the remedy continues to provide adequate protection of human health and the environment within 5 years after the commencement of this remedial action.



William E. Muno
Superfund Division
U.S. Environmental Protection Agency



Date

**RECORD OF DECISION DECLARATION
FINAL REMEDIAL ACTION
Reilly Tar and Chemical Company Site
Dover, Ohio**

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I. SITE NAME AND LOCATION

The Reilly Tar and Chemical Company site ("the Site") is a 3.66 acre parcel of land situated in Dover, Ohio, on Third Street, southeast of the junction of State Route 211 and State Route 39, three-quarters of a mile north of the junction of Sugar Creek and the Tuscarawas River (Figure 1). The Site is bordered on the northeast by an abandoned canal turning basin, which functions today as a drainage ditch directing storm water runoff from the City of Dover into the Tuscarawas River. Current land use adjacent to the study area is mainly commercial and residential north of the Site toward the Dover downtown area, and industrial to the west and southwest. Public power and sewage facilities are immediately east of the Site, and an open and undeveloped industrial area south of the Site is currently used for fill and borrow disposal. The area around the Site is crisscrossed with abandoned and active railroad tracks (Figure 2).

II. SITE HISTORY AND ENFORCEMENT ACTIVITIES

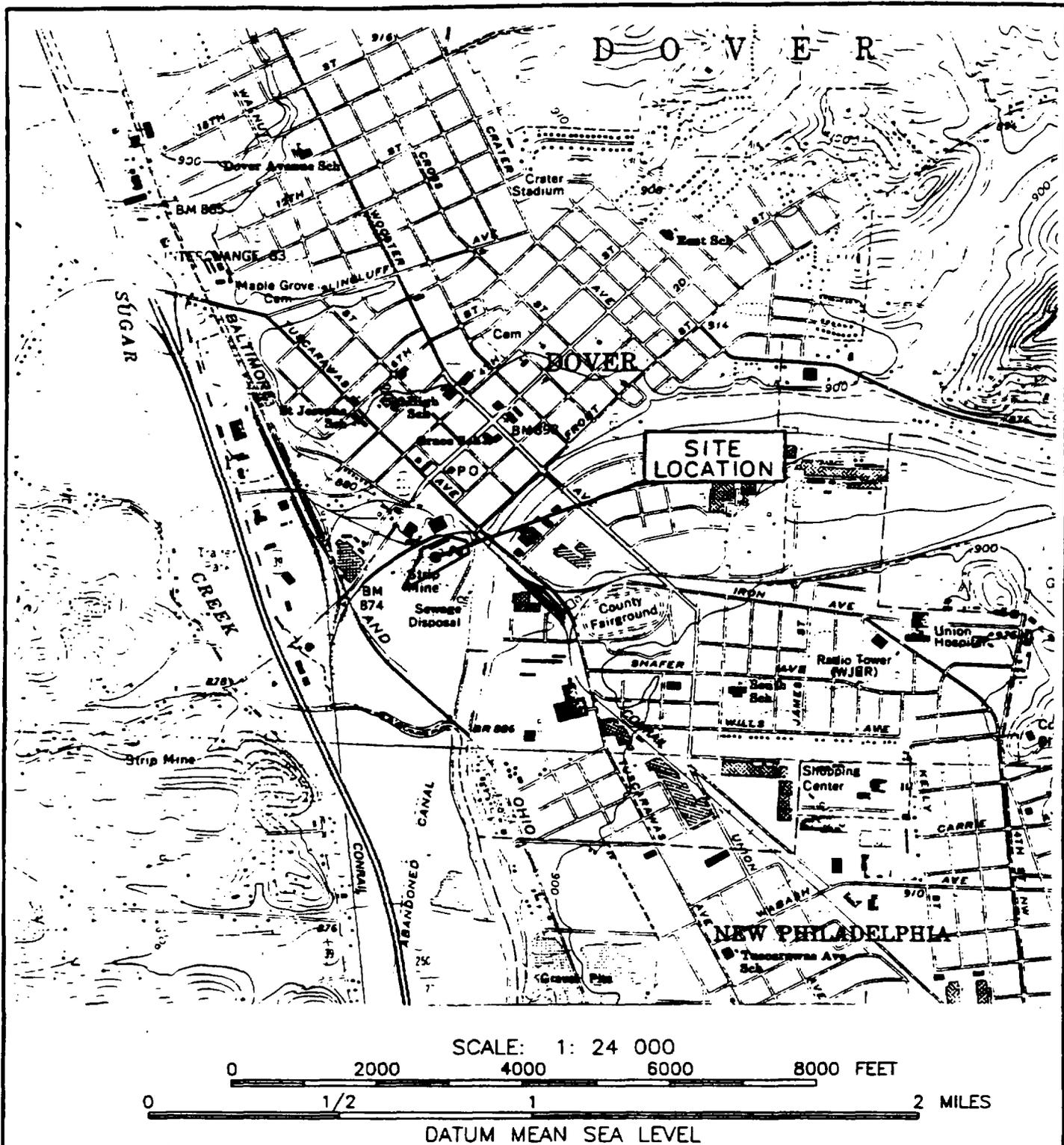
A.) Site History

The former Reilly tar plant in Dover, Ohio and adjacent areas have an extensive industrial history that began in the mid-1800s. The development of the Site includes part of the Ohio Canal, which paralleled the Tuscarawas River, the local pig iron blast furnace industry, a coking plant and foundry, and a coal tar refinery. The Site was established by the F. J. Lewis Manufacturing Co., on a parcel of land positioned between the Hanna Furnace Co., a blast furnace facility and the coke oven facility of the Dover By-Products Coke Company. The tar refinery was built on top of 10 to 20 feet of slag disposed there earlier by the blast furnace operations. A large area south of the refinery was also covered with slag, which was mined out during the 1940s and 1950s. This mined area, and the former Ohio Canal running along the east border of this area, were then used as a city dump from at least 1957 to 1969. There is some indication from aerial photographs that portions of the Ohio Canal were filled with municipal waste and trash prior to this period.

Coal tar refining operations were conducted on the Site from approximately 1921 through 1956. During that time, coal tar wastes accumulated on the ground from spillage and other Site activities. Reilly Industries, Inc. owned and operated the Site as a coal tar refinery from at least 1932 to 1956. The Site has been vacant and inactive since 1956, when Reilly Tar & Chemical Corporation sold the property. The property has passed through several owners since 1956 and is presently owned by Ronald and Lois Quillin.

B.) Site Assessment/Enforcement History

Reilly submitted a Notification of Hazardous Waste Site form to the U. S. EPA in June 1981. The form identified the general and specific types of waste at the Site to be "organic" and "creosote", respectively.



REFERENCE:
DOVER, OHIO
USGS 7.5 Minute Quadrangle



ENSRTM

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FIGURE 1
SITE LOCATION
REILLY TAR AND CHEMICAL CORP. SITE
DOVER, OHIO

Drawn:	MSH	Date:	8/9/91	Project Number:		Rev:	
App'd:	EDM	Revised:	2/28/92	5660-018		1	

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During March of 1985, five ground water monitoring wells were installed on the Site by Herron Consultants, Inc., with personnel from Ecology & Environment, Inc., and Region V FIT supervising the drilling, soil sampling, and well installation. The investigation was performed to generate ground water data for the Hazard Ranking System model.

Ground water was found to flow east southeast across the Site. Tar was detected in one well (EPA Well MW-3). Ground water sampling was conducted to determine if contaminants were leaking into the ground water. Three of the EPA wells, MW-2, MW-4, and MW-5, were found to contain polycyclic aromatic hydrocarbons ("PAH") (Figure 3). Volatile organics, primarily chloroform, 1,1,1 Trichloroethane, and carbon tetrachloride were detected in the off-site and upgradient well (EPA Well MW-1). The report summarizing this investigation was dated February 11, 1986, and titled "Hydrogeologic Report on the Reilly Tar and Chemical Company Site, Dover, Ohio" (Ecology and Environment, Inc., 1986).

In July 1988, seven soil samples were collected and analyzed for PAH by the U.S. EPA. Results of the analyses indicated the presence of PAH compounds common to coal tar. The background soil sample detected only trace amounts of a few PAH compounds. A Hazard Ranking Score was prepared by EPA for the Site based on information and assumptions concerning the risk to the local population, the potential migration of hazardous substances in the ground water, the potential contamination of drinking water supplies, and the potential for direct contact. The Site was scored at 31.38 and was subsequently proposed for addition to the National Priorities List ("NPL") on July 24, 1988.

In early October 1988, under a Consent Order executed by USEPA, Reilly Industries and Ronald and Lois Quillin erected a fence around the Site. Pursuant to a Unilateral Administrative Order ("UAO") issued by U.S. EPA to Reilly Industries and Ronald and Lois Quillin on March 29, 1989, a Remedial Investigation ("RI") was undertaken. The results of this investigation are discussed in detail below. The Remedial Investigation Report for the Reilly Tar and Chemical Corporation, Dover, Ohio dated June 1993 may be found in the Site repository, at the Dover Public Library, and in the Administrative Record.

C.) Expedited Response Actions

An Expedited Response Action ("ERA") for removal of surficial coal tar and asphalt materials at the Site was performed by Reilly Industries during June and July 1990. All work was performed under U.S. EPA oversight, in accordance with the Health and Safety Plan prepared for the ERA. U.S. EPA oversight was provided by the Region V, Emergency Response Section On-Site Coordinator ("OSC") and the U.S. EPA Technical Assistance Team ("TAT") contractor, Roy F. Weston, Inc. A total of 90 truck loads of surficial coal tar materials were hauled off Site in 40 days. The total quantity of material removed was 1,442 tons.

Three types of surficial coal tar materials were encountered during the ERA. These materials included residual asphaltic coal tar material, highly viscous coal tar, and broken slag saturated with coal tar. The residual asphalt was found in many areas of the Site. Coal tar was found

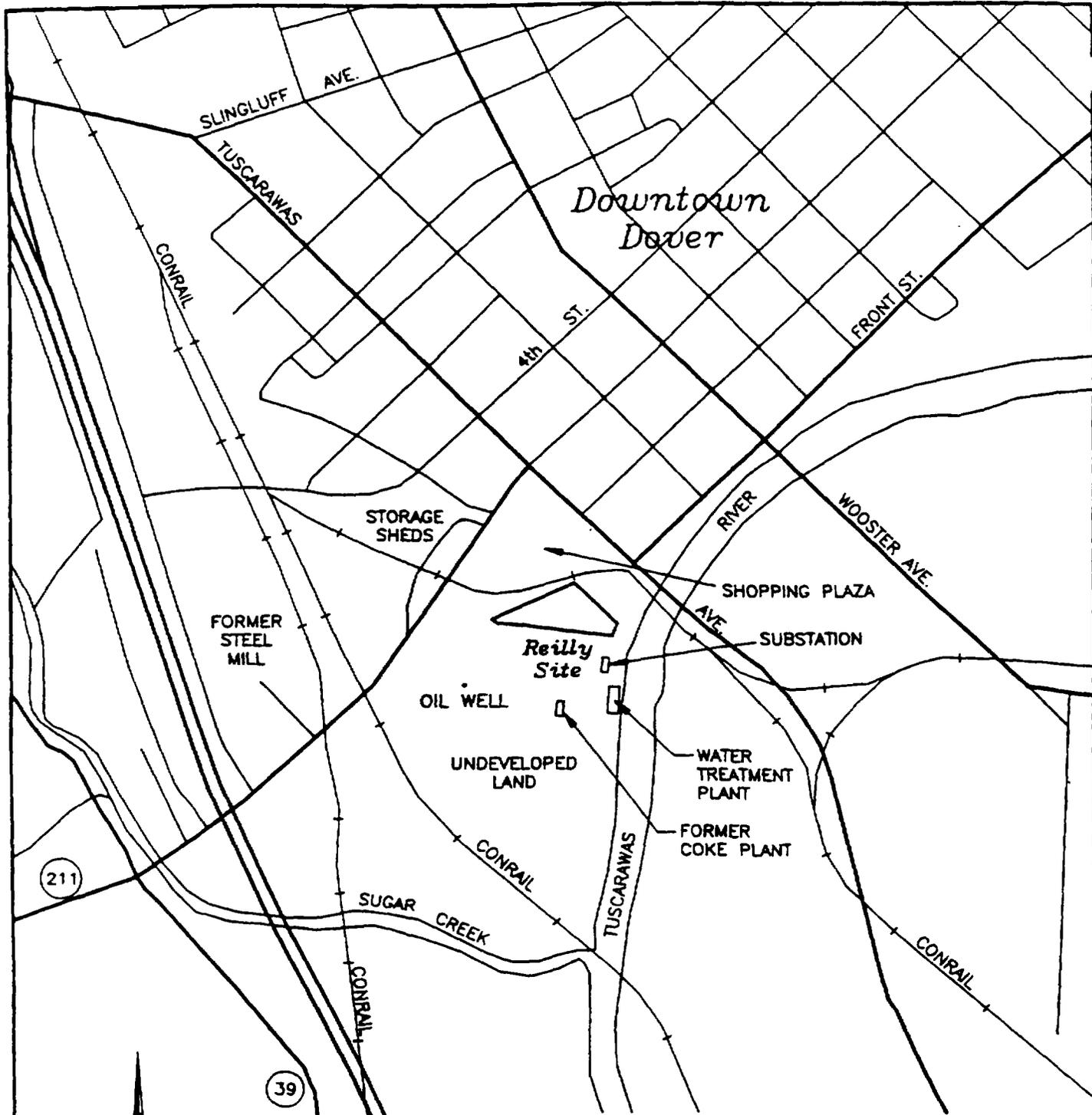


FIGURE 2

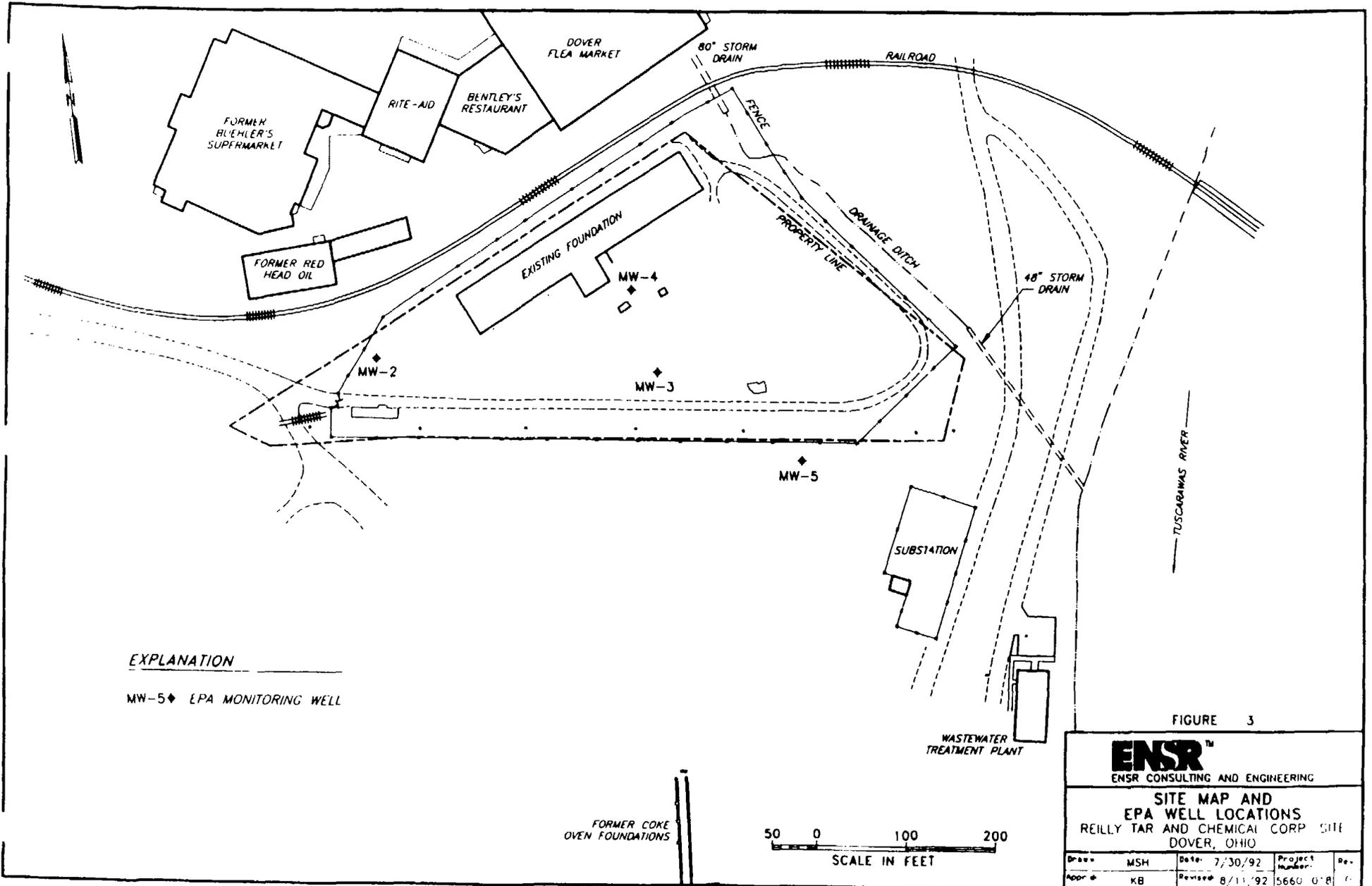


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OFF-SITE SURFACE FEATURES
 REILLY TAR AND CHEMICAL CORP. SITE
 DOVER, OHIO

Drawn	MSH	Date	7/7/92	Project Number		Rev	
Appr'd	MAC	Revised	7/30/92	5660-018		0	

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EXPLANATION

MW-5 ♦ EPA MONITORING WELL

FIGURE 3

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**SITE MAP AND
EPA WELL LOCATIONS
REILLY TAR AND CHEMICAL CORP SITE
DOVER, OHIO**

Drawn	MSH	Date	7/30/92	Project	
App'd	KB	Revised	8/11/92	Number	5660 018

around the perimeter of the main foundation, within and surrounding two smaller foundations or sumps; within the former canal turning basin, and in a limited section in the eastern part of the Site. The slag mixed or saturated with coal tar was confined to two locations (the smaller foundations/sumps).

When the ERA was performed and at the present time, the coal tar material is not a listed hazardous waste under state or federal hazardous waste regulations (OAC 3745-51 and 40 CFR Part 261). Representative composite samples of coal tar, asphaltic materials, and slag were tested and found to be non-hazardous by the EP toxicity test. Thus, the coal tar materials were not a RCRA characteristic hazardous waste. However, because the coal tar materials contained hazardous substances (primarily PAH), Reilly Industries disposed the non-hazardous wastes in a RCRA Subtitle C landfill (Envirosafe Services of Ohio, Oregon, Ohio).

III. HIGHLIGHTS OF COMMUNITY PARTICIPATION

The U.S. EPA conducted community relations activities throughout the RI and Feasibility Study ("FS") to provide interested citizens and officials information about progress at the Site.

On May 24, 1990 a letter was sent to all Concerned Citizens detailing the purpose of the ERA. On April 4, 1991 a news release and a letter to concerned citizens was sent out explaining that the Site was now entering the RI/FS stage. The site repository was established on April 23, 1991 making available all approved documents to concerned citizens. A public information session was then held on April 30, 1991; representatives from U.S. EPA and OEPA were present in order to answer questions and concerns the public had on the proposed work for the site. Summary fact sheets were distributed May 8, 1991.

Once the RI/FS was completed, a proposed plan was issued to present the selected remedial alternative to the public. A public comment period was held from January 15, 1997 to February 15, 1997 during which the public was allowed to formally comment on the proposed alternative; concerned citizens were able to present their concerns, perceived problems or other potentially unknown information which U.S. EPA then considers when making the final decision on a remedial alternative. A public information session was held to present the chosen remedial alternative and to solicit comments and address concerns from the citizens and local officials on the proposed alternative. The meeting was held on January 22, 1997.

IV. SCOPE AND ROLE OF OPERABLE UNIT

The remedial response action in this Record of Decision encompasses the entire Site, with the possible exception that there may be another response forthcoming based on further assessment of ecological risks in the Tuscarawas River. More will be said about this under the Summary of Site risks and the Selected Remedy.

V. SUMMARY OF SITE CHARACTERISTICS

A.) Physical Characteristics

i.) Surface Features

Surface features on and surrounding the Site include buildings, vacant building foundations, roadways, parking lots, railroad tracks, telephone/power poles, open fields, waterways, a power substation and topographical features. The surface of the Site is covered primarily by unconsolidated slag and demolition debris. Topographically, the Site is relatively flat with the exception of a steep slope along the east property boundary near a power substation, and an abandoned canal turning basin along the northeast property line. The Site is approximately 15 feet higher in elevation than the abandoned canal turning basin.

Four building foundations from former Site operations remain on Site. A large foundation, approximately 300 feet long and 50 feet wide, is located near the northern property line. The elevation of the concrete floor of the large foundation is 874.8 feet above MSL at its southwest end, approximately 8 feet below ground surface. The foundation floors are approximately 1 ½ feet thick. Near the middle of this foundation is a southern extension approximately 35-feet wide by 35-feet long. The foundation walls extend about 2 to 3 feet above ground surface. Three additional concrete foundations are located to the south and southeast of the large foundation. Two foundations are located near the center of the Site approximately 65 feet south of the large foundation. These concrete foundation walls are flush with the ground surface while the floors extend about 2 feet below the ground surface. The third foundation is located approximately 200 feet southeast of the large foundation. This concrete foundation extends approximately 2 feet above ground surface.

A storm water drainage ditch (approximately 350-feet long) parallels the northeast Site property boundary. Storm water enters the drainage ditch through an 80-inch culvert pipe. Storm water exits the drainage ditch into a 48-inch culvert pipe. The storm water ditch is bounded on the northeast and southwest by steep slopes. South of the Site is vacant and undeveloped land that gently slopes to the south.

ii.) Surface Water

There are no surface water bodies on the Site except for standing water that occasionally lies within the building foundations and open excavations. Surface water bodies adjacent to the Site include the storm water drainage ditch, Sugar Creek and the Tuscarawas River. The storm water drainage ditch receives water from the City of Dover storm water sewers in the downtown area. The storm water drainage discharges directly into the Tuscarawas River. The bottom of the storm water ditch is near the top of the clay layer and may receive recharge from the perched aquifer during dry periods. During dry periods, water generally does not flow in the storm water ditch, however, standing water has usually been observed in portions of the storm water ditch

Sugar Creek is located approximately one-half mile south-southwest of the Site. Sugar Creek is a shallow stream generally about 50 feet wide. Its origin is at the Mead City Dam approximately 9 miles north of the Site. Sugar Creek flows southeast and discharges into the Tuscarawas River. The Tuscarawas River is located approximately 210 feet east of the Site. The Tuscarawas River is approximately 150-feet wide and flows north to south. The Tuscarawas River is dammed at several locations to maintain constant pool elevation. A fixed-head dam is located near the Site and immediately south of the City of Dover waste-water treatment plant.

iii.) Geology

The Site lies within an ancient river valley, trending roughly northwest-southeast, formed by stream erosion and subsequently filled with glaciofluvial outwash deposits. The unconsolidated sediments extend approximately 185 to 215 feet below the ground surface. Underlying the unconsolidated sediments are Pennsylvanian Age conglomerates, sandstones, shales, limestones and coals of the Allegheny Plateau.

iv.) Soils

In general, the Site is underlain by 13 to 19 feet of solidified slag, except in the far western portion. Surficial material in the far western portion of the Site and off-site locations consists primarily of fill material (e.g., sand, gravel, wood, brick, and building rubble). A 0.3- to 2-foot fill horizon consisting of slag, silt, sand and gravel is located directly beneath the solidified slag. A 1.5- to 9.2-foot thick clay layer exists below the slag and fill layer on Site and at most off-site locations, where tested. The clay layer is continuous within the perimeter of the site, but not at all points sampled off-site. The surface of the clay layer is relatively flat with typical reliefs of 1 to 2 feet.

Coal tar, asphaltic material, some small tar pockets, and tar-like odors were observed at 25 of the 74 borings taken during the RI. These borings were primarily located in a south-southeast direction from the former foundations and near the storm water drainage area. Tar was encountered near the center of the Site, directly west of the drainage ditch and near the northern property boundary. Tar was identified at 16 of the 74 surface borings. Asphaltic materials were primarily encountered in the central and western portions of the Site in the upper 2 feet of fill. Asphaltic materials were encountered in 8 of the 74 borings sampled.

v.) Clay Layer

The first natural soil encountered on the Site and some off-site areas consists of a gray clay with brown mottling. The mottling is typically interpreted as a result of bioturbation and anaerobic conditions. In addition, root structures were occasionally observed within the clay. This clay layer was presumably deposited in a wetland (e.g., swamp) along the Tuscarawas River flood plain. The clay layer acts as a confining layer and ranges in thickness from 1.5 to 9.2 feet on Site and at most off-site locations

The clay layer appears to act as an impermeable boundary to downward migration of coal tar product and perched water. Three Shelby tube clay samples were collected by Reilly for laboratory determination of hydraulic conductivity (permeability). Hydraulic conductivity values ranged from 1.4×10^{-7} to 6.0×10^{-9} cm/sec.

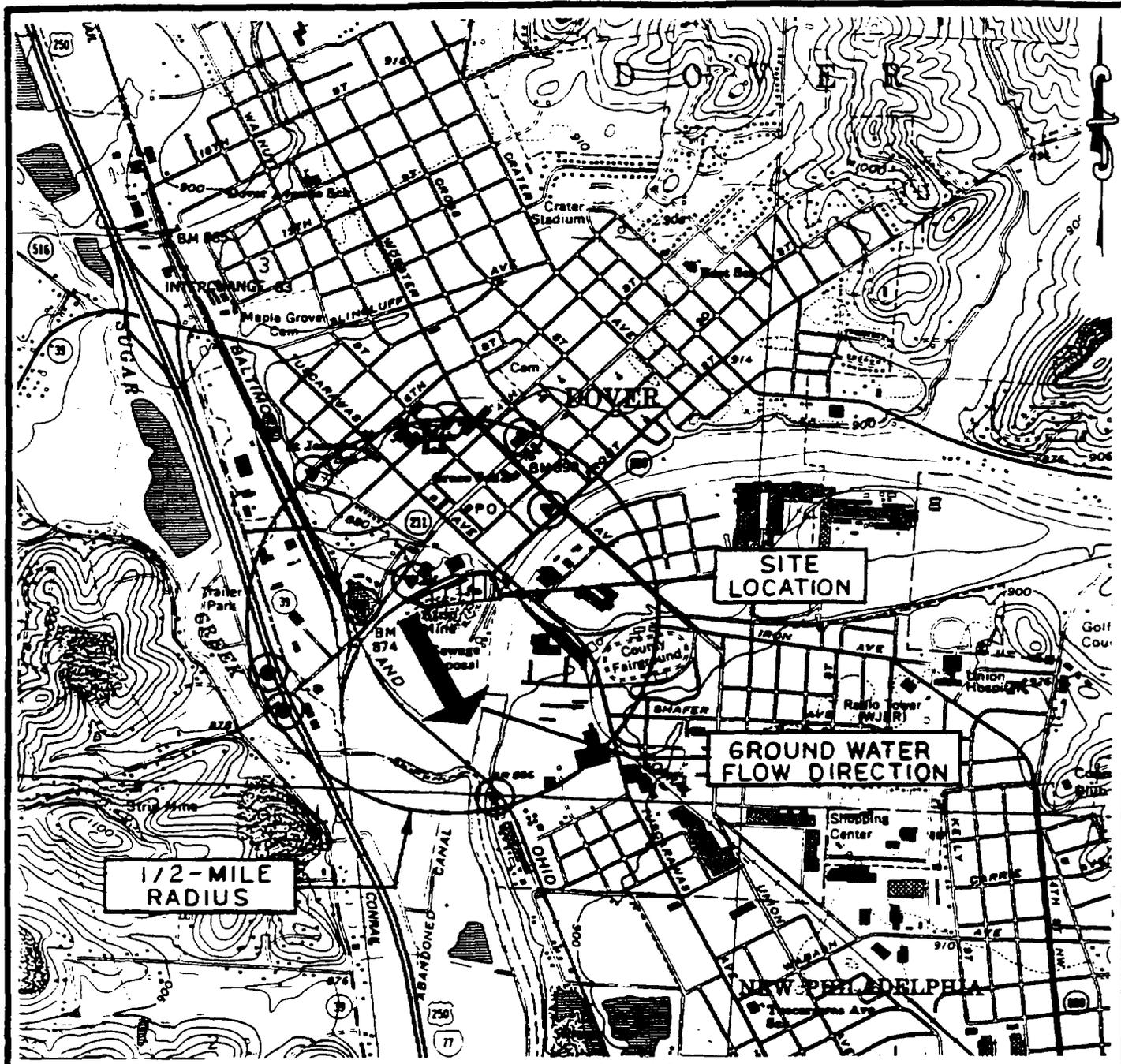
vi.) Ground Water

Ground water in the Dover area is utilized by rural, municipal and industrial consumers. Ground water at the Site occurs in three separate aquifer systems: perched, regional and bedrock. The perched aquifer is located above a clay layer. The saturated thickness averages 3 feet, but varies from as little as 6-inches to as much as 6 feet. Well yields in the perched aquifer varied from non-productive to greater than 2 gallons per minute. The ground water flow in the perched aquifer is influenced by the elevation of the clay layer. Ground water will flow from points of high elevation to low elevation due to gravity. The perched water zone appears to be interconnected with the storm water drainage ditch. Typical horizontal hydraulic gradients in the perched aquifer ranged from 6.84×10^{-3} to 1.58×10^{-2} . This aquifer is not utilized for water production.

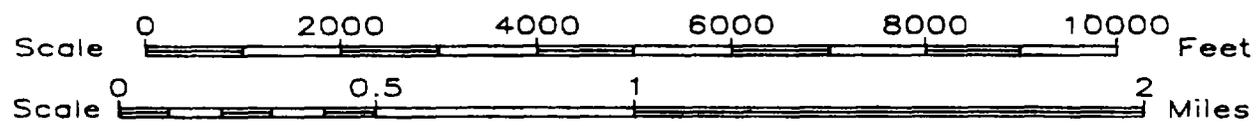
The regional aquifer is divided into three "zones" for the purposes of discussion below: shallow, mid-depth and deep. The zone designated as shallow is anywhere from 19-51 feet below the ground surface; the mid-depth zone extends from 52-180 feet, and the deep zone extends from 180-290 feet. The regional aquifer consists of coarse, permeable, glaciofluvial sand and gravel sediments. The regional aquifer occurs in the paleo-river channels and has a saturated thickness greater than 290 feet. In most areas, the regional aquifer is hydraulically connected to the Tuscarawas River. The regional aquifer is widely used for municipal water supplies for Dover and New Philadelphia and for numerous industrial production wells. Potentiometric ground water levels in the regional aquifer indicate that flow is in an east-southeast direction toward the Tuscarawas River. Closer to the river, the ground water flows in an easterly direction. Typical horizontal hydraulic gradients in the deep and shallow regional aquifer ranged from 1.11×10^{-3} to 2.6×10^{-4} and 1.11×10^{-3} to 1.54×10^{-3} , respectively.

Vertical hydraulic flow gradients indicate that there is a downward component of ground water flow in selected monitoring well clusters. This suggests that the shallow portion of the aquifer is hydraulically interconnected to the Tuscarawas River (i.e., shallow ground water may discharge to the river), while the mid-depth and deep portions of the aquifer may not be influenced by the Tuscarawas River.

The bedrock aquifer consists of sandstone, shale, and limestone sequences of the lower Pennsylvanian system and/or sandstone and shale sequences of the Upper Mississippian system. Primary ground water flow in the bedrock occurs within the pore space of the consolidated rock. Secondary ground water flow in the bedrock generally occurs along bedding planes, joints and fractures.



Scale: 1:24,000



REFERENCE:
Dover, Ohio, USGS 7.5 Minute Quadrangle

- Drinking Water Well
- ▼ Non-Drinking Water Well

QUADRANGLE LOCATION

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FIGURE 4
LOCATION OF WATER WELLS WITHIN
ONE-HALF MILE OF THE REILLY SITE
REILLY TAR AND CHEMICAL CORP. SITE

Drawn	MSH	Date	12/9/91	Project Number		Rev	
App'd	MAC	Revised	1/15/92	5660-018		1	

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vii.) Ecology

The following habitat types were identified at the Site and surrounding areas: river, riparian forest (riverbank and drainage ditch), meadow, disturbed area (Site and off-site), wooded area, and industrial area. According to information provided by the U.S. Fish and Wildlife Service and the Ohio Department of Natural Resources (DNR), there are no records of any state-listed or federally-listed threatened or endangered species in the area. Although the Indiana bat (*Myotis sodalis*), a federally-listed endangered species, occurs in Ohio, Tuscarawas County is outside of its range. The Ohio DNR Natural Heritage Program has no records of threatened or endangered plant or animal species, nor of any nature preserves or unique ecological features in the vicinity of the study area.

B.) Nature and Extent of Contamination

Sampling and analysis was conducted in two phases for the RI. Subsurface soil, surface soil, surface water and ground water samples were analyzed for target compound list ("TCL" - a common list of organic compounds) constituents and subsurface soil and ground water samples were also analyzed for target analyte list ("TAL" - a common list of metal compounds) constituents during Phase I (Figure 4). Analytical data from Round 1 ground water samples and Phase I soil and sediment samples were used to determine the contaminants of concern ("COC") that would be investigated during the Phase II program. COC are as follows:

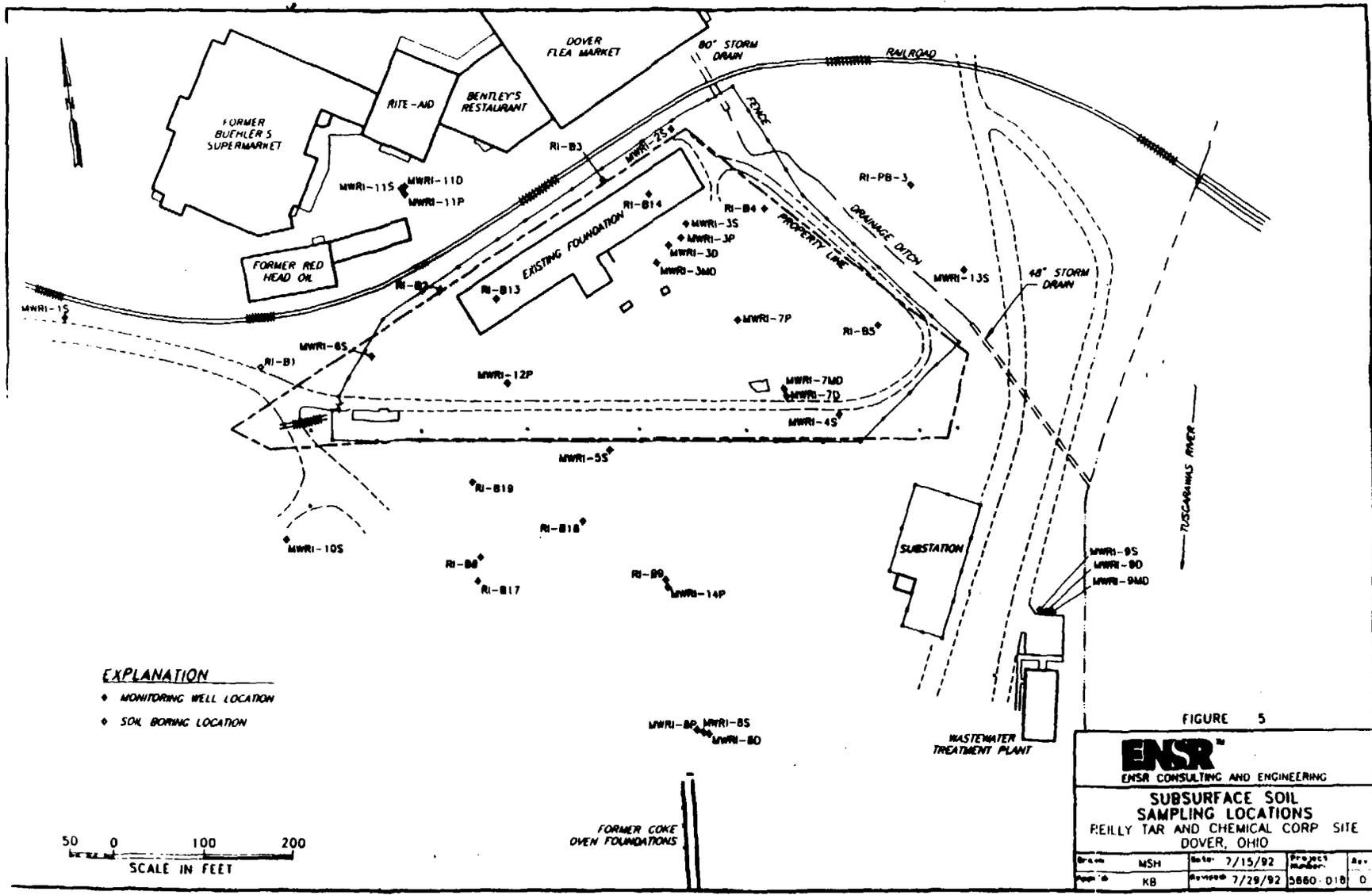
Table 1: Contaminants of Concern

VOLATILES	METALS	SEMIVOLATILES
benzene	arsenic	phenol
toluene	barium	naphthalene
ethylbenzene	chromium	PAH compounds
xylenes	lead	2-methylphenol
styrene		3 + 4-methylphenol

Additionally, Toxicity Characteristic Leaching Procedure ("TCLP" - a procedure that replaced the EP toxicity test) analyses were performed on tar and asphalt samples and TAL metals analyses were performed on slag samples.

Seven different media were sampled and analyzed. The media include:

- surface soils,
- subsurface soils,
- surface water,
- sediments,
- slag



EXPLANATION

- ◆ MONITORING WELL LOCATION
- ◇ SOIL BORING LOCATION



FIGURE 5

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SUBSURFACE SOIL SAMPLING LOCATIONS
REILLY TAR AND CHEMICAL CORP SITE
DOVER, OHIO

Drawn	MSH	Date	7/15/92	Project		Rev.	
Prepared	KB	Revised	7/29/92	5860-D18			D

- groundwater
- tar and asphalt.

i.) Surface Soils

31 samples were collected from a sample depth of 2 to 3 feet below ground surface and analyzed for TCL volatiles and semivolatiles. Two additional samples were collected for BTEX, styrene, PAH, phenolics, and naphthalene analyses.

Volatiles

The following volatiles were detected in the surface soil samples: benzene, toluene, ethylbenzene, styrene, and xylene.

Benzene was detected at four of the 31 sample locations analyzed at concentrations ranging from 0.018 mg/kg to 18.0 mg/kg. Toluene was detected in eight sample locations at concentrations ranging from 0.003 to 46.0 mg/kg. Ethylbenzene was detected in six surface soil sample locations with concentrations ranging from 0.037 to 13.0 mg/kg. Styrene was detected in five soil sample locations and ranged in concentration from 0.031 to 23.0 mg/kg. Xylene was detected in seven sample locations and ranged in concentration from 0.006 to 110 mg/kg. Samples collected directly southwest of the drainage ditch contained elevated concentrations of BTEX. These samples were saturated with water, very odorous, and exhibited a hydrocarbon sheen.

Semivolatiles

Semivolatile compounds were generally detected across the Site in all surface soil samples. The distribution of semivolatile organic compounds is summarized into four separate groups: total non-carcinogenic polycyclic aromatic hydrocarbons ("TNP"), total carcinogenic polycyclic aromatic hydrocarbons ("TCP"), phenolics and naphthalene. TNP compounds include acenaphthene, acenaphthylene, anthracene, fluoranthene, fluorene, phenanthrene, pyrene, and benzo(g,h,i)perylene. TCP compounds include: benzo(a)anthracene, chrysene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, indeno(1,2,3,c,d)pyrene, and dibenz(a,h)anthracene. Phenolics include phenol, 2-methylphenol, 4-methylphenol and 2,4-dimethylphenol.

TNP concentrations ranged from a low of 0.681 mg/kg to a high of 7,763 mg/kg. TCP concentrations in surface soil samples ranged from a low of 0.32 mg/kg to a high of 3,310 mg/kg. Phenolics were detected in only one sample at a concentration of 0.71 mg/kg. Naphthalene was detected all but two of the 31 surface soil sample analyzed. Naphthalene concentrations ranged from 0.1 to 2,300 mg/kg.

In summary, relatively high levels (greater than 100 mg/kg) of TNP and TCP were detected in surface soils primarily in the center of the Site and west of the storm water drainage ditch. Naphthalene was also detected in the same areas. Phenolics were only detected in one surface soil

sample. These analytical results support the field observations of coal tar, sheens or odors in the surface soil samples.

ii.) Subsurface Soils

Twenty-two subsurface soil samples were collected from borings and analyzed for volatiles, semivolatiles, and metals. Only the natural materials; i.e., the clay, and sand and gravel units were sampled.

Volatiles

Benzene, toluene, styrene, xylene and ethylbenzene were detected in the subsurface soils.

Benzene was detected in only two samples at concentrations of 0.003 and 0.055 mg/kg. Toluene, styrene, and ethylbenzene were detected in one sample at concentrations of 0.056, 0.032, and 0.028 mg/kg, respectively. Xylene was detected in three samples at 0.004 mg/kg, 0.014 mg/kg, and 0.210 mg/kg. BTEX, present in low concentrations in coal tar, were only found in samples from three borings, two on-site borings and one boring off-site (RI-5S), which is located adjacent to the southern Site boundary.

Semivolatiles

TNP were found in the majority of subsurface samples, as described above. However, concentrations were relatively low compared to surface soil concentrations. The highest concentration of TNP was detected in a sample adjacent to the Site's southern property boundary, and at a depth of 24 to 26 feet. This sample was taken from the bottom of the clay. TNP were not detected in samples collected near bedrock.

The highest concentration of TCP (12.9 mg/kg) was detected at RI-5S at the 24- to 26-foot depth. The remainder of TCP concentrations were less than 5 mg/kg. Phenolics were only found in two borings, with the 24- to 26-foot depth sample in RI-5S again showing the highest concentration (18.8 mg/kg). Naphthalene was present in several samples, but at relatively low concentrations compared with concentrations found in the surface soils.

In summary, semivolatiles were detected in subsurface soils on the top of the clay, at the bottom of the clay and in the sand and gravel. However, the highest concentrations were found in the clay. Semivolatiles were also detected in the upgradient off-site boring MWRI-1S. Please note that free coal tar was not sampled.

Inorganics (TAL Metals and Cyanide)

Twenty four subsurface soils collected during Phase I sampling were analyzed for 23 TAL Metals and cyanide. Antimony, cadmium, mercury, silver, thallium and cyanide were not detected in any subsurface soil samples above method quantitation limits. Selenium was detected in two samples (RI-2S-8 and RI-2S-10) at concentrations of 1.8 and 1.1 mg/kg, respectively. Based on these findings, these metals are not considered constituents of interest at the Site.

iii.) Surface Waters

Three surface water samples were collected from the drainage ditch; i.e., upstream (RI-SW-1), midpoint (RI-SW-2), and downstream (RI-SW-3) locations. Samples were analyzed for TCL volatiles and semivolatiles. Volatile organics were not detected above quantitation limits in the three surface water samples. Two semivolatile compounds were detected. 1,2-dichlorobenzene was detected in RI-SW-3 at a concentration of 0.001 mg/l and in RI-SW-3D (duplicate) at a concentration of 0.002 mg/l. Bis(2-ethylhexyl)phthalate was detected in each surface water sample. Concentrations ranged from 0.019 mg/l in RI-SW-1 to 0.003 mg/l in RI-SW-2 and RI-SW-3. Bis(2-ethylhexyl)phthalate is a common laboratory contaminant.

iv.) Sediments

Four sediment samples and one duplicate were collected from the storm water drainage ditch. Three sediment samples were also collected along the western bank of the Tuscarawas River.

Storm Water Drainage Ditch

Volatiles were not detected in the upstream sediment sample or the midstream sample. Benzene, toluene, ethylbenzene, xylenes and styrene were detected in the three downstream sediment samples. This finding correlates well with the observance of tar-like material in the downstream drainage ditch sediments. Semivolatile organic compounds were detected in each of the storm water drainage ditch sediment samples.

TNP compounds were detected in each of the drainage ditch sediment samples. TNP concentrations ranged from 9.2 mg/kg to 3,650 mg/kg. TCP compounds were also detected in each of the sediment samples and ranged in concentrations from 7.7 mg/kg to 1,062 mg/kg. Phenolics were detected in only one downstream sample at a concentration of 241 mg/kg. Naphthalene was detected in three of the four sediment sample locations and ranged from 3.0 mg/kg to 2,600 mg/kg.

In summary, the finding of BTEX in the downstream drainage ditch sediment samples correlates well with the observance of tar-like material at these locations. Semivolatiles were found in both upstream and downstream locations. This suggests that a component of the semivolatiles is entering the drainage ditch from storm water sources within the City of Dover.

Tuscarawas River Sediments

Two samples were collected adjacent to the storm water culvert pipe discharge location. One sample showed BTEX to be present, while the second sample showed no BTEX present. Volatiles were not present upstream nor downstream of this location. Semivolatiles were found both upstream and near the culvert pipe discharge location. These data, coupled with physical observations of tar-like material in the samples near the culvert pipe discharge, suggest the storm water drainage ditch may be a route of migration of coal tar from the drainage ditch to the river. TNP concentrations ranged from 3.98 to 591 mg/kg and TCP concentrations ranged from 3.15 to 311.4 mg/kg. Phenolics were not detected in the river sediment samples and naphthalene was detected at one location at 3.1 mg/kg.

v.) Slag

Three slag samples were collected and analyzed to characterize the metals content of slag. The locations were selected to provide representative coverage across the Site. These samples were free of visible tar or asphaltic material, did not contain any loose fill materials typically observed above and below the slag, and were considered representative of the undisturbed slag material.

The following metals were not detected in the slag above quantitation limits: antimony, cadmium, copper, mercury, nickel, selenium, silver, and thallium. Cyanide was also not detected above quantitation limits in each slag sample. Aluminum, calcium, iron, magnesium, manganese, potassium, and sodium were detected at relatively high concentrations. Barium was also detected at concentrations ranging from 193 mg/kg to 1,250 mg/kg.

vi.) Ground Water

Monitoring wells installed in conjunction with the Phase I RI were sampled and analyzed during the first round for TCL volatiles, semivolatiles, pesticides and PCBs, and TAL metals (dissolved and total). The results of Sampling Round I demonstrated that pesticides, PCBs, and metals, except lead, chromium, arsenic and barium, could be excluded from Sampling Round 2 analyses. Additionally, each monitoring well sampled during Round 2 was analyzed for low level (ng/l or parts per trillion) PAH. The analyses performed during Sampling Round 3 were revised and reduced based on the results of Round 1 and Round 2 data. The revised list included BTEX, styrene, PAH, phenolics, arsenic, barium, chromium and lead. Deep, mid-depth and off-site shallow wells were also analyzed for low level PAH compounds.

a.) Volatile Organics Characterization

Perched Aquifer

Ground water samples were collected and analyzed from four of seven perched monitoring wells. In accordance with the approved Phase II Work Plan, three perched wells (MWRI-3P, -7P, and -12P), which underlie the site, were not sampled, as coal tar was visible in each well.

BTEX were detected in three of the four wells (MWRI - 8P, 11P, and -BW). Perched well -8P is located south and MWRI-11P and -BW are located to the north of the Site. Based on ground water flow direction projected for the perched water aquifer beneath the Site, it is possible that perched water from the Site is moving out radially in the direction of all three wells (Figure 7).

Benzene concentrations ranged from 0.082-0.68 mg/l, toluene ranged from 0.005-0.63 mg/l, ethylbenzene ranged from 0.02-0.15 mg/l, and xylene from 0.22-0.63 mg/l.

Shallow Regional Aquifer

BTEX and styrene were detected in five of eleven shallow monitoring wells (Table 2).

Table 2: VOC Concentrations in Shallow Monitoring Wells (mg/l)

Compound	MWRI-3S	MWRI-4S	MWRI-5S	MWRI-6S	MWRI-11S	MCLs
Benzene	0.28-0.78	0.002-0.014	0.21-0.39	0.014-0.032	0.076	0.005
Toluene	0.031-0.28	0.006-0.013	0.044 - 0.13	0.003	0.02	1.0
Xylene	0.07-0.35	0.006-0.066	0.066-0.086	0.01-0.022	0.034	10
Ethyl Benzene	0.016-0.05	0.01-0.034	0.016-0.033	0.013-0.015	0.01	0.7
Styrene	0.0007-0.091	0.003-0.006	0.004-0.005	ND	ND	0.1

The above results show that BTEX and styrene were found in on-site shallow monitoring wells (MWRI-3S, -4S and -6S). These compounds were also found in the off-site downgradient well MWRI-5S, however, this well is in close proximity to the Site's southern property boundary and is thus considered representative of Site conditions. No other downgradient monitoring well contained BTEX or styrene, suggesting that these compounds are primarily contained within the Site boundary. BTEX was also found in the upgradient shallow well (MWRI-11S). Of these compounds, only benzene exceeded maximum contaminant levels ("MCLs"). Downgradient shallow wells were free of BTEX compounds.

Mid-Depth Regional Aquifer

Toluene was detected in mid-depth monitoring wells located on-site. Toluene ranged from 0.002 to 0.017 mg/l. Toluene was not detected off-site nor adjacent to the Tuscarawas River. The results show toluene is present on-site at mid-depth in the regional aquifer, but at relatively low concentrations, well beneath MCLs or action levels.

Deep Regional Aquifer

Toluene was detected during Sampling Round 1 at low levels on-site, in MWRI-3D (0.01 mg/l) and MWRI-7D (0.008 mg/l). Toluene was not detected in the upgradient, deep well (MWRI-11D) nor the two downgradient deep wells (MWRI-8D and -9D).

b.) Semivolatile Organics Characterization

Perched Aquifer

Semivolatiles were detected in each of the four perched wells sampled. The following concentrations of TNP, TCP, phenolics and naphthalene were detected (Table 3):

Table 3: Semivolatiles in Perched Aquifer (mg/l)

Well Number	TNP	TCP	PHENOLICS	NAPHTHALENE
MWRI-8P	0.52	BDL ^(a)	1.09	5.3
MWRI-11P	2.248	0.344	0.128	9.3
MWRI-BW	0.105	BDL	BDL	0.18
MWRI-14P	0.031	0.002	0.052	0.008
(a)	BDL - below detection level			

Semivolatiles were found in all of the perched wells (since coal tar was observed in on-site perched wells, it is assumed semivolatiles are present). A perched well north of the Site (MWRI-11P) contained the highest concentrations of TNP and TCP. This is likely the result of coal tar being present above the clay. However, the other well north of the Site (MWRI-BW) contained no TCP or phenolics. The visible extent of coal tar in the perched aquifer is shown in Figure A.

Shallow Regional Aquifer

Semivolatiles were detected in all shallow wells, except the downgradient well located adjacent to the river and the lateral gradient wells. TNP were detected in seven monitoring wells at the following concentration ranges: MWRI-1S (0.005 mg/l), MWRI-3S (0.232 to 0.572 mg/l), MWRI-4S (0.195 to 0.346 mg/l), MWRI-5S (0.001 to 0.046 mg/l), MWRI-6S (0.257 to 0.892 mg/l), MWRI-8S (0.057 mg/l), and MWRI-11S (0.098 mg/l).

TCP were detected in three of the 11 monitoring wells using standard CLP methods. However, highly sensitive parts per trillion ("ppt") analyses showed TCP to be present in eight of the shallow monitoring wells. TCP was not detected in downgradient well MWRI-9S and lateral

wells MWRI-10S and -13S. TCP were detected in the following shallow monitoring wells using CLP and ppt analytical methods.

Table 4: Low Level TCP in Shallow Monitoring Wells (ppt)

WELL NUMBER	CLP METHOD	LOW LEVEL PPT METHOD
MWRI-1S	BDL ^(a)	1,877 and 380 ng/l
MWRI-2S	BDL	5,400 ng/l
MWRI-3S	0.009 mg/l	12,390 ng/l
MWRI-4S	0.008 to 0.06 mg/l	45,500 ng/l
MWRI-5S	BDL	1,945 ng/l
MWRI-6S	BDL to 0.078 mg/l	38,800 ng/l
MWRI-8S	BDL	6,680 ng/l
MWRI-11S	BDL	20,410 ng/l

(a) BDL - below detection level.

Phenolics were detected in 2 of the 11 shallow monitoring wells (MWRI-3S and MWRI-5S) at concentrations of 0.205 to 2.06 mg/l respectively. Naphthalene was detected in 6 of the 11 shallow monitoring wells at the following concentrations: MWRI-1S (0.004 mg/l), MWRI-3S (1.1 to 5.6 mg/l), MWRI-5S (0.002 to 0.11 mg/l), MWRI-6S (0.002 to 0.17 mg/l), MWRI-8S (0.01 mg/l), and MWRI-11S (0.011 mg/l)

In summary, semivolatile organics were generally detected in on-site shallow wells. TNP and naphthalene were detected in the downgradient well (MWRI-8S) but not in MWRI-9S located adjacent to the Tuscarawas River. TNP and naphthalene concentrations in MWRI-8S are similar to concentrations detected in on-site wells. In addition, TNP and naphthalene were also detected in the upgradient well (MWRI-11S) at similar concentrations detected in on-site monitoring wells.

TCP were detected in all monitoring wells using ppt analyses, except for MWRI-10S and MWRI-13S (lateral monitoring wells) and MWRI-9S (downgradient monitoring well). TCP concentrations in the upgradient well (MWRI-11S) were similar to concentrations in the on-site wells. TCP compounds were also detected in downgradient well MWRI-8S, however, concentrations were higher than two of the five on-site monitoring wells.

Mid-Depth Regional Aquifer

Phenolics and naphthalene were the only semivolatiles detected using CLP procedures in the two on-site mid-depth monitoring wells and only during one sampling round. Phenolics were detected once in each of the on-site mid-depth wells, 0.002 mg/l in MWRI-3MD and 0.005 mg/l in MWRI-7MD. Naphthalene was only detected during Sampling Round 1 in MWRI-7MD at 0.004 mg/l.

Semivolatile organics were not detected in downgradient well MWRI-9MD. TCP and TNP were not detected in on-site wells MWRI-3MD, MWRI-7MD

TNP and TCP were not detected using standard CLP, however, TCP compounds were detected using ppt procedures. TCP were detected in each of the three mid-depth monitoring wells using ppt analytical methods. The concentrations of TCP compounds during Sampling Round 3 ranged from 125 to 193 ng/l.

Deep Regional Aquifer

TCP and TNP were not detected in the deep monitoring wells using standard CLP procedures, however, TCP were detected in all deep wells using ppt procedures. TCP concentrations ranged from 42 to 74 ng/l. Phenolics were detected in the off-site upgradient well (MWRI-11D) and the two off-site downgradient deep wells (MWRI-8D and -9D). Concentrations ranged from 0.006 to 0.019 mg/l. Naphthalene was detected in only one on-site deep well (MWRI-3D) at a concentration of 0.0008 mg/l.

c.) Pesticides and PCBs

Pesticides and PCBs were analyzed as part of Sampling Round 1. No PCBs were detected and only one pesticide (Delta BHC) was found above quantitation limits. Based on these results, pesticides and PCBs were not COCs and were removed from future rounds of sampling and analyses.

d.) Metals

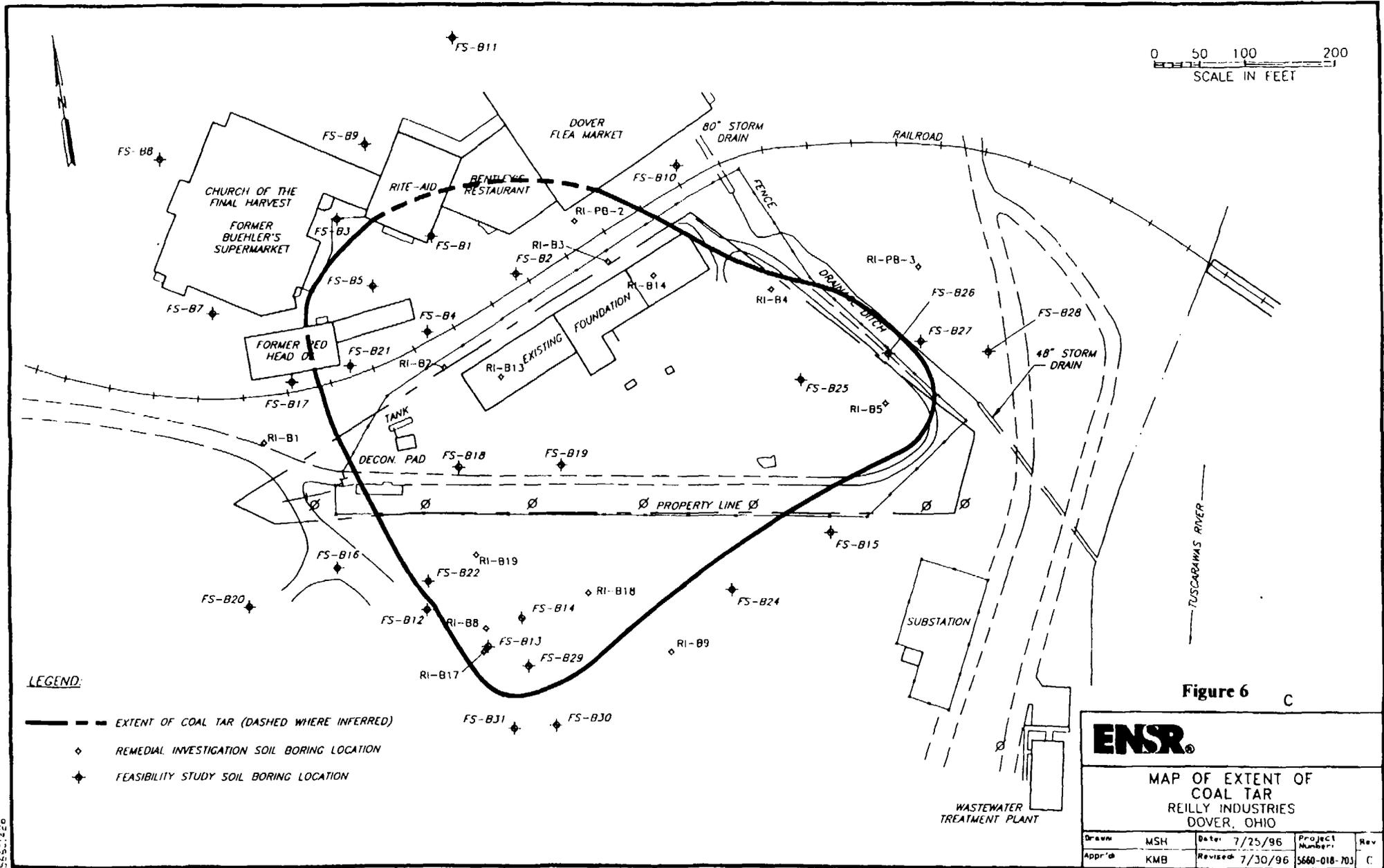
Seventeen metals and cyanide were analyzed. Metals of interest include arsenic, barium, chromium, and lead; their analytical results are discussed below.

Perched Aquifer

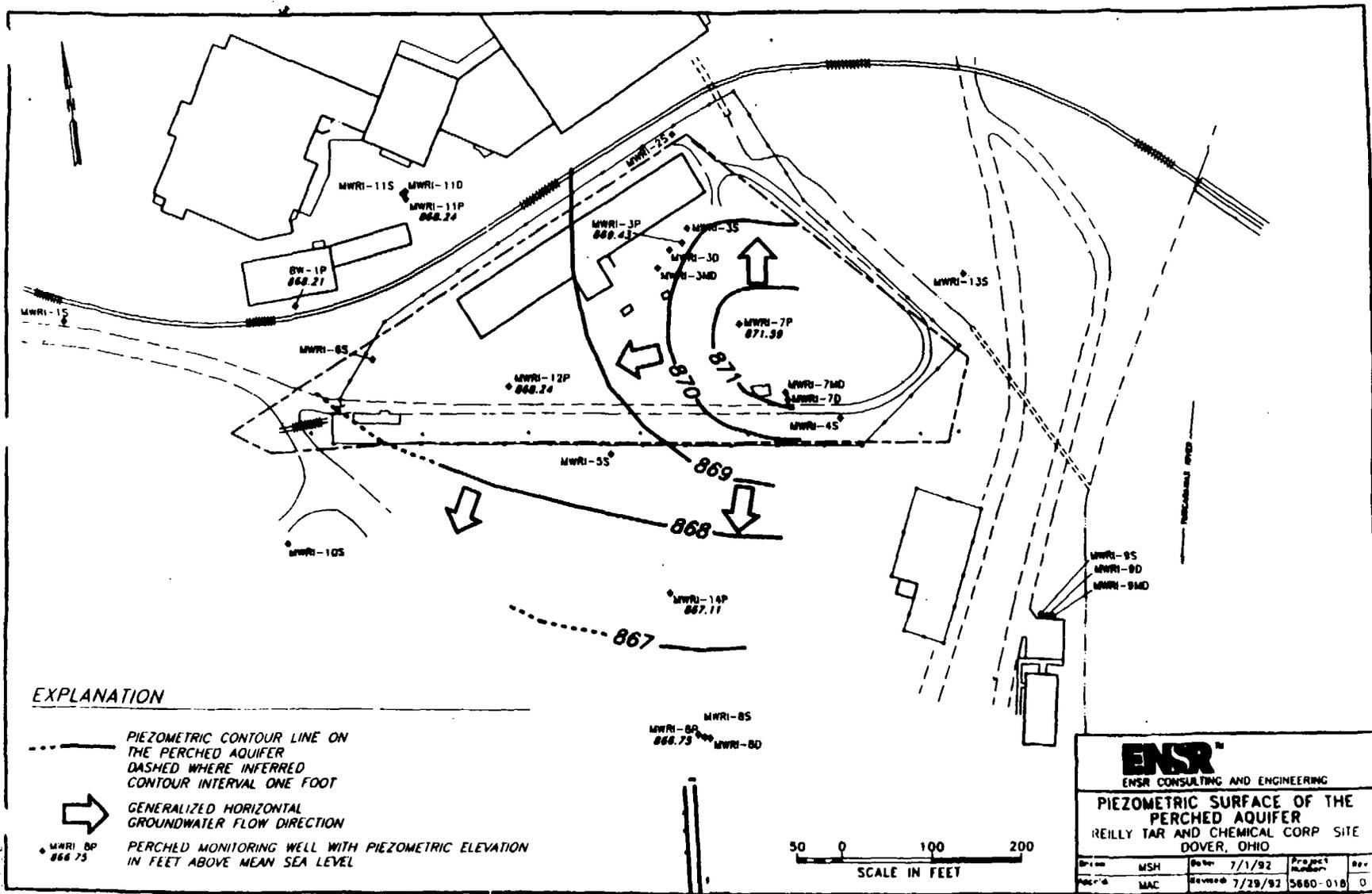
Total arsenic was not detected in any perched well sampled, while dissolved arsenic was only detected in one perched well. Total and dissolved barium were detected in each of the three perched monitoring wells sampled. Total chromium was detected in two perched wells and dissolved chromium was detected in only one perched well. Total lead was detected in two perched wells while dissolved lead was not detected in these perched wells.

Shallow Regional Aquifer

Arsenic was sporadically detected in shallow wells at concentrations less than the MCL of 0.050 mg/l. Barium was consistently detected in the shallow monitoring wells. Barium concentrations were highest in the laterally upgradient well (MWRI-1S) and downgradient well MWRI-8S. Total barium concentrations exceeded the MCL (1.0 mg/l) in these same two wells. Total and dissolved barium concentrations were less than the MCL in the on-site wells. Chromium was



5660-018-703



4-18

Figure 7

detected only twice, once in a total metals sample and once in a dissolved metals sample. Additionally, the chromium concentrations in these samples were well below the MCL of 0.10 mg/l. Total lead was generally detected in similar concentrations in each shallow monitoring well and only one sample contained concentrations of lead greater than the action level of 0.015 mg/l. In addition, dissolved lead was detected in two of the 11 shallow wells and at concentrations well below the action level.

Mid-depth Regional Aquifer

Arsenic and chromium were not detected in mid-depth wells, while barium and lead were detected, but well below MCLs and action levels.

Deep Regional Aquifer

Arsenic was not detected in any on-site or off-site deep wells. Barium was detected in both on-site and off-site wells, and chromium and lead were only detected in on-site wells. In general, concentrations of barium, chromium and lead are similar in each deep well. The concentrations are less than their respective MCLs and action levels, except for one lead analysis from MWRI-3D. Subsequent analyses of MWRI-3D did not detect lead above the action level.

e.) Tar and Asphalt

Nine tar and asphaltic material samples were collected during the RI investigation for chemical characterization by TCLP. Three subsurface tar samples failed TCLP for benzene. The tar sample in each of these samples was collected directly above the clay layer. The remaining six samples passed the TCLP.

VI. SUMMARY OF SITE RISKS

A.) Human Health Risk Assessment

A human health risk assessment was performed by Reilly Industries, per Risk Assessment Guidance for Superfund, Volume I, Human Health Evaluation Manual, (Part A). This assessment follows the standard steps of identification of Chemicals of Potential Concern ("CPCs"), exposure assessment, toxicity assessment, and risk characterization.

i) Identification of Chemicals of Potential Concern:

This step of the risk assessment process involves reviewing the chemicals detected in various media sampled during the RI, and identifying the most toxic, prevalent, mobile, and/or persistent chemicals. Based on this analysis, the CPCs are selected for inclusion in the remainder of the risk assessment. CPCs include the following:

- VOC
 - benzene
 - ethylbenzene
 - styrene
 - toluene
 - xylene (total)

- SVOC
 - benzoic acid
 - bis(2-ethylhexyl)phthalate
 - dibenzofuran
 - 2,4-dimethylphenol
 - 2-methylphenol
 - 4-methylphenol
 - phenol

- PAH

Of the CPCs listed above, PAH and BTEX are the primary constituents which present risk to human health and the environment at the Site. In order to evaluate the feasibility and effectiveness of remediation options, it is important to understand the properties of these compounds and how they behave in the environment. The following is a brief description of these compounds, their fate in the environment, and their physical properties.

PAH

PAH are a group of organic compounds consisting of two or more rings each made up of six carbon atoms. Each of these rings is termed aromatic because of the nature of the bonds holding the ring together. These bonds affect the physiochemical properties of the rings and the resulting molecule. The number of rings affects the properties of the molecule. For example, the two-ring molecule naphthalene is relatively water soluble (32 mg/l) and adheres weakly to soils while the 5-ring benzo(a)pyrene is very insoluble (0.0038 mg/l) and adheres strongly to solids. The PAH of primary toxicologic concern are large with four or five rings. In general, all PAH are characterized by the following physiochemical properties:

- Poor chemical reactivity: under normal environmental conditions, these PAH are resistant to chemical breakdown.
- Biodegradation by microorganisms: under typical conditions biodegradation rates may be increased by supplying nutrients and/or introducing organisms that are adapted to degrading PAH.
- Slow rates of volatilization to the atmosphere.

- Moderate to high rates of photolysis: if these PAHs are exposed to sunlight, they will degrade.
- Poor water solubility.
- High degree of sorption to solids.
- High retardation rates in ground water.

Typically, a few processes control the fate and transport of a chemical in the environment. While photolysis has the potential to rapidly degrade PAH, this reaction is limited by the lack of light penetration into the soil. In soil and ground water environments, the processes of sorption to solids and biodegradation are likely to dominate the fate and transport of PAH. Thus, PAH are likely to move very slowly through subsurface soils above and below the water table. The rate of movement in the saturated zone is likely to be 10 to 20,000 times slower than the rate of water movement. The most significant means of degrading PAH, in-situ, is likely to be by biological means. The rate of biodegradation can vary dramatically depending upon the number and type of microorganisms present, the concentration of PAH, and the availability of nutrients. Unless biodegradation is encouraged (for example, by adding nutrients), the PAH are likely to persist in the soil for long periods of time.

As mentioned above, each of the PAH of concern has a distinct set of chemical and physical properties. The two fate and transport processes that are likely to be of importance at the Site, biodegradation and sorption, will vary in rate according to the size of the PAH molecule. The relative ability of the PAH of interest to adsorb to solids is as follows:

Naphthalene < Anthracene < Benzo(a)anthracene ≈ Chrysene < dibenzo(a,h)anthracene < Benzo(a)pyrene < Benzo(b)fluoranthene < Indeno(1,2,3-c,d)pyrene.

The relative rate of biodegradation is likely to follow the opposite order of sorption. This is due to the fact that, in general, more complex molecules are degraded more slowly and more likely to adsorb to solids, and compounds that adsorb well to solids are less available to microorganisms for degradation.

BTEX Compounds

BTEX compounds are the principle VOCs which were detected at the Site. Due to their volatility, the transport of BTEX through the air-filled pores of unsaturated soils is an important transport mechanism for near-surface soils. The rate of volatilization from soil is influenced by soil porosity, soil moisture, temperature, convection currents, and barometric pressure changes. Their behavior and fate in the environment is described as follows:

- poor chemical reactivity under normal environmental conditions;

- potential for degradation by microorganisms;
- potential to volatilize to the atmosphere;
- poor sorption to soils; and
- soluble in water.

The primary BTEX constituent of interest on-site, with respect to risk, is benzene. Benzene, C_6H_6 , is a volatile, colorless, and flammable liquid aromatic hydrocarbon which possesses a characteristic odor. Its structure is such that all of the carbon and hydrogen atoms are coplanar and all of the six carbon-to-carbon bonds are identical. Due to its volatility, the transport of benzene through the air-filled pores of unsaturated soils is an important transport mechanism for near-surface soils. The rate of volatilization from soil is influenced by soil porosity, soil moisture, temperature, convection currents, and barometric pressure changes. For ground water, however, volatilization into soil pore spaces is not likely to be a significant transport mechanism for removal of benzene. This is due to relatively slow movement by diffusion of vapor phase benzene through the unsaturated zone. The Henry's Law Constant for benzene (5.5×10^{-3} atm-m³/mol) indicates that benzene, upon reaching surface water via ground water discharge, is likely to volatilize from the surface water body. Benzene would transfer readily from the aqueous phase to the vapor phase by air stripping.

Benzene is weakly adsorbed by soils and is likely to be mobile in ground water. However, based on benzene's retardation factor, it would still be likely to migrate more slowly than ground water at the Site. Under normal environmental conditions, benzene is not expected to undergo hydrolysis, oxidation or reduction reactions in the soil/ground water environment. However, numerous studies have shown biodegradation to be effective in removing benzene from ground water. Benzene would be degraded to carbon dioxide and water.

ii.) Exposure Assessment

The objective of the exposure assessment is to evaluate the magnitude and frequency of potential exposure to CPCs. Potential human receptors are identified based on characteristics of the Site and surrounding area. Potential routes of exposure to Site-related CPCs are identified and the extent of a receptor's exposure by this route is estimated. While these scenarios represent hypothetical people and activities, they reflect the physical description of the Site and the surrounding industrial and residential areas as well as the activities that typically occur in these areas.

The receptors evaluated include an on-site resident, an on-site worker, a Construction worker, a trespassing teenager, and an off-site resident. Although the Site is currently zoned for industrial use and is owned by a construction company, it is possible that sometime in the future the Site may be developed for residential use. Therefore, as a health protective measure, an on-site resident was included in the risk assessment.

Potential exposure pathways (“PEPs”) are the routes by which potential receptors may be exposed to CPCs. Direct exposure pathways are those in which the potential human receptor comes in direct contact with a CPC in an environmental medium such as air, water, or soil. Indirect exposure pathways involve exposure to CPCs through the food chain. The following direct and indirect exposure pathways were included in the risk assessment:

- Inhalation of soil as dust and vapors;
- Dermal contact and incidental ingestion of soils;
- Dermal contact and incidental ingestion of surface water;
- Dermal contact and incidental ingestion of sediment;
- Groundwater exposure (inhalation, ingestion, dermal contact); and
- Ingestion of fish.

In accordance with EPA guidance a reasonable maximum exposure (“RME”) scenario was performed in this risk assessment.

iii.) Risk Characterization

In the risk characterization the results of the exposure assessment are combined with the results of the toxicity assessment to derive pathway-specific quantitative estimates of potential health risks. The estimates for each exposure pathway are then summed to give total risk estimates for the Site. Separate quantitative estimates of potential risk are derived for carcinogenic effects and for noncarcinogenic effects. Results are presented in Table 5 below.

Table 5: Summary of Site Risks

Exposure Scenario	Non-Carcinogenic Risk	Carcinogenic Risk
On-site Resident	2.87	1.3 x 10E-3
Trespassing Teenager	0.092	1.25 x 10E-4
Off-site Resident	0.00065	2.4 x 10E-7
On-site Worker	0.4416	6.5 x 10E-4
Construction Worker	0.064	9.6 x 10E-6

The total carcinogenic risk for the on-site resident is 1.3×10^{-3} , well above the threshold acceptable risk range of 10^{-6} - 10^{-4} . Approximately 91 percent of this risk estimate (4.0×10^{-4}) is associated with ingestion of and dermal contact with carcinogenic PAH in surface soil. The total RME noncarcinogenic hazard index associated with this scenario is 2.87, indicating that there are unacceptably high toxic health effects from contamination on-site to a theoretical resident. Approximately 86 percent of the potential noncarcinogenic hazard index is associated with exposure to the methylphenols in the groundwater

The total carcinogenic risk for an on-site worker is 6.5×10^{-4} , also above the threshold risk range. The non-carcinogenic risk to an on-site worker is below 1.0. Exposure to surface soil by the trespassing teenager poses a risk estimated to be 1.25×10^{-4} , 94 percent of which is associated with exposure to carcinogenic PAH in surface soil.

Total potential carcinogenic risk to the construction worker is below 1×10^{-4} and risks to an off-site resident living across the Tuscarawas River east of the Site is below 1×10^{-6} . The total hazard indices for an off-site resident living east of the Tuscarawas River, the trespassing teenager, and the construction worker are below 1, which indicates that no potential noncarcinogenic health effects associated with these exposure scenarios are expected to occur.

B.) Ecological Risk Assessment

In accordance with The Risk Assessment Guidance for Superfund Environmental Evaluation Manual (OSWER Directive 9285.7-01, March 1989), a baseline ecological risk assessment was conducted to qualitatively and quantitatively evaluate the potential for adverse ecological effects to occur due to the presence of Site-related chemicals in the environment. The habitats and indigenous species present on the Site and surrounding areas were identified during two Site visits conducted in April and July of 1992. According to the U.S. Fish and Wildlife Service and the Ohio Department of Natural Resources, there are no threatened or endangered species in this area.

The potential ecological exposure pathways included the ingestion of and/or direct contact with CPCs in the surface water and sediments of the Tuscarawas River and the drainage ditch, and the ingestion of and/or direct contact with CPCs in soils both on and off the Site. The foodchain exposure pathway, i.e., the ingestion of organisms and plants containing Site-related chemicals, was also assessed.

Information on the habitats, CPCs, and potential exposure pathways were evaluated to develop a conceptual Site model for the risk assessment. The key species and habitats, those most likely to be exposed to Site-related chemicals, were identified for analysis. The habitats included the Tuscarawas River, the drainage ditch, and the Site. Aquatic and benthic species were evaluated as representatives of the surface water and sediment environments of the Tuscarawas River and the drainage ditch, and the cottontail rabbit was assessed as a representative of the terrestrial environment. Screening assessments were conducted on the surface water, sediment, and terrestrial habitats.

The results of the terrestrial screening assessment indicate that cottontail rabbits are not likely to experience adverse effects from exposure to CPCs in the surface water and sediments of the drainage ditch, and in on-site soils and vegetation. Extrapolating from the results of the cottontail rabbit analysis, based on the chemical properties of the CPCs and the limited terrestrial potential exposure pathways, the potential for adverse effects on terrestrial species in the area of the Site is likely to be minimal.

The results of the aquatic screening assessment were inconclusive. While acute and chronic toxicity effects are not likely to occur to aquatic species residing in the Tuscarawas River, surface water concentrations of CPCs may exceed chronic toxicity levels in the drainage ditch. Moreover, the results of the sediment screening assessment indicate that chronic toxicity effects are likely to occur to benthic species in the Tuscarawas River sediments in the vicinity of the drainage ditch outfall. Sediment concentrations of CPCs may exceed toxicity levels in the drainage ditch.

Based on the conclusions of the aquatic, sediment, and terrestrial screening assessments, monitoring the river appears to be warranted regarding the effects on contaminants in the surface water sediments in the drainage ditch and in the outfall of the Tuscarawas river on aquatic species.

VII. DESCRIPTION OF SITE-WIDE REMEDIAL ALTERNATIVES

The presence of coal tar CPC, particularly BTEX and PAH, in the soil, in free tar product on the surface, in sediments and in groundwater present a risk to human health and a potential threat to the environment, as stated above. Several Site-wide alternative cleanup methods were evaluated in the FS and in addenda to the FS, which can be found in the Site repository and in the Administrative Record. These alternatives were developed and evaluated on the basis of a number of criteria which are discussed below.

A.) Remedial Action Objectives and Cleanup Levels

Remedial action objectives (“RAO’s”) for each environmental media are developed in the FS, subsequent to the RI and risk assessment. RAOs serve as the basis on which remedial response alternatives are designed. RAOs must account for each pathway in which a risk or a potential risk to human health or the environment exists. Cleanup levels in each media are also determined in the FS. Cleanup levels are derived from within the acceptable residual carcinogenic risk range of 10^{-6} - 10^{-4} , based in part on future land use and other criteria such as practicability. For this Site, cleanup levels were derived based on a residual carcinogenic risk level of approximately 1.0×10^{-5} , in an industrial future use scenario. Non-carcinogenic risks in the industrial use scenario were beneath the threshold hazard quotient of 1.0, and therefore are not of concern.

The following RAOs were developed for the Site:

- Prevent worker exposure to CPC in the surface soil, tarry materials and sediments which pose an excess cancer risk of approximately 10^{-5} or greater;
- Prevent worker exposure to CPC in the sub-surface soil which pose an excess cancer risk of approximately 10^{-5} or greater;
- Prevent exposure to CPC in the perched aquifer above MCLs;
- Prevent exposure to CPC in the regional aquifer above MCLs;

- Prevent migration of CPC in surface and subsurface soils, and tarry materials to the regional aquifer;
- Prevent migration of CPC in sediments that would result in exceedences in ambient water quality criteria in the Tuscarawas River;
- Prevent migration of CPC in the perched aquifer migrating to the drainage ditch or the regional aquifer;
- Prevent migration of CPC in the regional aquifer.

B.) Applicable or Appropriate and Relevant Requirements

CERCLA Section 121(d) requires that remedial actions take into consideration the requirements of all federal and state environmental regulations. Those pertinent regulations are referred to as applicable or relevant and appropriate requirements (“ARARs”).

Applicable requirements are standards, standards of control, and other substantive environmental protection requirements, criteria, or limitations promulgated under federal or state law that specifically address a hazardous substance, pollutant, contaminant, remedial action, or other circumstance at a CERCLA Site.

Relevant and appropriate requirements are standards, standards of control, and other substantive environmental protection requirements, criteria, or limitations promulgated under federal or state law that, while not applicable to a hazardous substance, pollutant, contaminant, remedial action, or other circumstances at a CERCLA Site, are well suited for use at the CERCLA Site because they address problems or situations sufficiently similar. In some circumstances, a requirement may be relevant to the particular Site-specific situation but will not be appropriate because of differences in the purpose of the requirement, the duration of the regulated activity, or the physical size or characteristic of the situation it is intended to address. Only those requirements that are determined to be both relevant and appropriate must be complied with.

A requirement that is judged to be relevant and appropriate must be complied with to the same degree as if it were applicable. Relevant and appropriate requirements that are more stringent than applicable requirements take precedence. There is more discretion in the determination of relevant and appropriate requirements than in the determination of applicable requirements. It is possible for only a part of a requirement to be relevant and appropriate.

In addition to the legally binding requirements established as ARARs, many federal and state programs have developed criteria, advisories, guidelines, or proposed standards that may provide useful information or recommend procedures if no ARARs address a particular situation or if existing ARARs do not provide protection. In such situations, these “to be considered” (“TBC”) criteria or guidelines should be used to set remedial action levels. Examples of criteria to be

considered are reference doses (“RFD”) and slope factors for ingestion of non-carcinogenic and carcinogenic compounds, respectively, for the risk assessment.

The potential ARARs for the Site were developed based on the July 29, 1994 letter from U.S. EPA Region 5 to Mr. James Bratina of Reilly Industries, transmitting a listing of potential ARARs. ARARs were then identified based on the specific characteristics of the Site, constituents of interest identified in soil and ground water, and potential alternatives available to remediate those constituents. The applicability of each of the potential ARARs listed in the July 29, 1994 letter was evaluated to assess the potential ability of technologies to comply with ARARs.

CERCLA Section 121(e) exempts any response action conducted entirely on Site from having to obtain federal, state, or local permits. On-Site actions need to comply only with the substantive aspects of ARARs, and not the corresponding administrative requirements. Therefore, permit applications and other administrative reviews and reporting, and record keeping requirements are not considered ARARs for actions conducted entirely on Site (USEPA 1988). Where a waiver from requirements set by an ARAR is needed to apply an alternative, a description and justification for the waiver is discussed in the detailed evaluation.

Based on the CERCLA statutory requirements, the remedial alternatives developed in this FS are analyzed for compliance with federal and state ARARs. This process involves the initial determination of potential requirements, the evaluation of the potential requirements for applicability or relevance and appropriateness, and finally, a determination of the ability of the remedial alternatives to achieve the ARARs.

Three classifications or requirements are defined in the ARAR determination process and are summarized below:

- chemical-specific;
- location-specific; and
- action-specific.

Chemical-specific ARARs include those laws and regulations governing the release of materials possessing certain chemical or physical characteristics, or containing specific chemical compounds. Examples include drinking water standards, and ambient air quality standards. These requirements generally set health or risk-based concentration limits or discharge limitations after treatment in various environmental media for specific hazardous substances.

A Site's location is a fundamental determinant of its impact on human health and the environment. Location-specific ARARs are restrictions placed on the concentration of hazardous substances or the conduct of activities solely because they are in specific locations. Some examples of special locations include flood plains, wetlands, historic places, and sensitive ecosystems or habitats.

Action-specific ARARs are usually technology- or activity-based requirements or limitations on actions taken with respect to hazardous wastes. These requirements are triggered by the particular remedial activities that are selected to accomplish a remedy. Since there are usually several alternative actions for any remedial Site, very different requirements can come into play. These action-specific requirements are not the driving force in determining the remedial alternative; rather, they indicate how a selected alternative must be achieved.

Potential Federal and State ARARs identified by U.S. EPA and OEPA for this Site are attached in Appendix A.

C.) Alternative Listing

The following alternatives evaluated in the FS and in addenda to the FS were presented to the Public through the Proposed Plan/Public meeting in Dover, Ohio on January 22, 1997:

Alternative 1 - No Action

The inclusion of the no action alternative is required by law and gives U.S. EPA a basis for comparison. This alternative will not reduce any potential public health or environmental risks currently associated with the Site. This alternative does not include any institutional controls preventing the use of ground water or surface water.

- Net Present Worth Cost: \$0

Alternative 2 - Institutional controls, excavation and thermal treatment of surface water drainage ditch and river sediments, surface soils and impacted perched zone material contaminated with greater than 100 ppm B(a)P-TE, and off-site disposal of solidified tarry materials; excavation and on-site disposal of surface water drainage ditch sediments, and surface soils contaminated with less than 100 ppm B(a)P-TE, and greater than 5 ppm B(a)P-TE. Ohio RCRA Subtitle D Solid Waste Cap over on-site disposed materials. Soil cover over remainder of the Site. Natural attenuation and long-term monitoring of shallow ground water. Sampling and analysis of sediments in the river.

Under this alternative, the Site will continue to be zoned for industrial use only, a deed restriction will be placed on-site banning all use of groundwater, and limiting disturbance of the land; impacted surface water drainage ditch sediments and contaminated surficial soils above the 100 ppm contamination level for B(a)P-TE - approximately 2480 cubic yards will be excavated and treated off-site in a cement kiln; impacted surface water drainage ditch sediments and contaminated surficial soils between 5 ppm and 100 ppm B(a)P-TE - approximately 5500 cubic yards, will be placed on-site within the building foundation and capped with an Ohio RCRA Subtitle D Solid Waste Cap; tarry materials will be solidified and disposed off-site, or recycled/reused as fuel/feedstock; the remainder of the Site will be covered with soil and vegetated. Sediments in the river will be sampled and analyzed to further determine possible impacts on the river ecosystem

Capital Cost:	\$1,257,000
30 yrs. Operation & Maintenance	\$ 965,000
Total Present Worth:	\$2,220,000

Alternative 3 - Institutional controls, excavation and thermal treatment of surface water drainage ditch sediments, surface soils and impacted perched zone material contaminated with greater than 100 ppm B(a)P-TE , and off-site disposal of solidified tarry materials or recycle/reuse of tarry materials as fuel or feedstock; excavation and on-site disposal of surface water drainage ditch and river sediments, surface soils and impacted perched zone soils, from collection trench excavation, contaminated with less than 100 ppm B(a)P-TE, and greater than 5 ppm B(a)P-TE. Ohio RCRA Subtitle D Solid Waste Cap over on-site disposed materials. Soil cover over remainder of the Site; hydraulic control and collection of perched ground water and natural attenuation and long-term monitoring of shallow ground water. Sampling and analysis of sediments in the river.

Under this alternative, all action items in alternative 2 will be implemented. In addition, a french drain will be placed in the perched aquifer to maintain a hydraulic barrier to perched tarry materials and groundwater migration off-site.

Capital:	\$1,379,100
O&M:	\$1,431,200
Present Worth	\$2,810,300

Alternative 4 - Institutional controls, excavation and off-site treatment of drainage ditch sediments, surface soils and impacted perched zone soils from the collection trench installation, contaminated with greater than 5 ppm B(a)P-TE; solidification and off-site disposal of tarry materials, or recycle/reuse of tarry materials as fuel or feedstock; a soil cover over the Site; hydraulic control and collection of perched ground water and natural attenuation and long-term monitoring of shallow ground water. Sampling and analysis of sediments in the river.

Under this alternative, all excavated soils and sediments, approximately 8000 cubic yards, will be treated off-site in a cement kiln, eliminating the need for a solid waste cap. Tarry materials will be solidified prior to disposal. Other action items will be implemented as above.

Capital:	\$2,238,200
O&M:	\$1,431,200
Present Worth	\$3,669,400

VIII. SUMMARY OF COMPARATIVE EVALUATION OF ALTERNATIVES

The NCP requires that the alternatives be evaluated on the basis of the following nine evaluation criteria: (1) Overall protection of human health and the environment; (2) Compliance with

ARARs; (3) Long-term effectiveness and permanence; (4) Reduction of toxicity, mobility, or volume through treatment; (5) Short-term effectiveness; (6) Implementability; (7) Cost; (8) State acceptance; and (9) Community acceptance. This section compares the alternatives with regard to these nine evaluation criteria, which are further defined below:

Overall Protection of Human Health and the Environment addresses whether or not the remedy provides adequate protection and describes how risks are eliminated, reduced or controlled through treatment, engineering controls, or institutional controls.

Compliance with ARARs addresses whether or not the remedy will meet all of the applicable or relevant and appropriate requirements of other Federal and State environmental statutes and/or provide grounds for invoking a waiver.

Long-term Effectiveness and Permanence refers to the ability of a remedy to maintain reliable protection of human health and the environment over time once cleanup goals have been met.

Reduction of Toxicity, Mobility, or Volume Through Treatment is the anticipated performance of the treatment technologies a remedy may employ

Short-term Effectiveness involves the period of time needed to achieve protection and any adverse impacts on human health and the environment that may be posed during the construction and implementation period until cleanup goals are achieved.

Implementability is the technical and administrative feasibility of a remedy, including the availability of goods and services needed to implement the chosen solution.

Cost includes capital and operation and maintenance costs.

Support Agency Acceptance indicates whether, based on its review of the RI/FS and Proposed Plan, the support agency concurs, opposes, or has no comment on the preferred alternative.

Community Acceptance addresses the public's comments on and concerns about the Proposed Plan and the FS Report. The specific responses to public comments will be addressed in the Responsiveness Summary attached to the Amended Record of Decision.

- A.) **Threshold Criteria: Overall Protection Of Human Health And The Environment and compliance With ARARs:**

Alternative 1, the No Action Alternative, satisfies none of the RAOs above and obviously does not satisfy the threshold criterion of overall protectiveness of human health and the environment. The risks to human health and potential risks to the environment remain

Alternative 2 satisfies some but not all of the RAOs and is not protective of human health or the environment. Specifically, the CPC in the free phase coal tar, which resides in the perched zone, would continue to migrate off-site unabated. The spread of coal tar CPC in the perched zone to the drainage ditch and potentially to the regional aquifer present potential threats to human health and the environment.

Alternatives 3 and 4 both satisfy RAOs and protect of human health and the environment through treatment of principal threats, and both meet ARARs as well. The remainder of this evaluation will be limited to alternatives 3 and 4.

- B.) Primary balancing Criteria: Long term effectiveness and permanence; Reduction in toxicity, mobility and volume through treatment; Short term effectiveness; implementability; and cost.

Long term effectiveness and permanence are substantially, if not entirely satisfied by alternatives 3 and 4. Both alternatives employ treatment of principal threats at the Site. Alternative 4 calls for the off-site thermal treatment of all Site soils and sediments in excess of 5 ppm B(a)P- TE, whereas alternative 3 calls for thermal destruction of soils and sediments which contain B(a)P-TE of 100 ppm or greater, and on-site containment of lightly contaminated soils and sediments (B(a)P-TE < 100 ppm, and > 5 ppm). Each alternative employs a drain to capture, pump and treat subsurface perched water with coal tar CPC in the perched zone.

A completely permanent remedy would entail excavation of any and all coal tar CPC on or underneath the Site. This approach was screened out due to its impracticability. Alternatives 3 and 4 are effective in the long term because surficial risks are effectively mitigated and underlying coal tar CPC are eventually drained out of the perched zone and treated in the local POTW. Alternative 3 is not entirely permanent, because it employs a containment component.

Alternative 4 fully satisfies the criteria to reduce toxicity, mobility and volume of CPC in soil and sediment through treatment. Surficial coal tar is either thermally treated, stabilized or recycled. Alternative 3 satisfies this criteria for the heavily contaminated soils and sediments, and for subsurface coal tar CPC, but not for lightly contaminated soils and sediments.

The short term effectiveness of alternatives 3 and 4 are approximately equal, the only difference being the amount of soil removed off-site and the construction of an Ohio Solid Waste Cap. The time to haul three times the amount of soil off-site in alternative 4 is off-set by the time to construct a cap. Risks posed to construction workers during remedial action were calculated in the risk assessment and are below levels of concern.

Both alternatives 3 and 4 are implementable. A cement kiln has been identified to receive the contaminated soils. The civil engineering and construction requirements to build an on-site vault, and install the french drain on-site are well understood and should pose no difficulty to design and remedial action. The net present worth of alternative 3 is \$2.8 million. The net present worth of alternative 4 is 30% higher, at \$3.67 million.

A cost-benefit analysis evaluates remedial response alternatives within the context of how completely each of the balancing criteria above are satisfied against the total cost of each remedy. Between two remedies, a cost benefit analysis identifies the incremental increase in benefit (based on the balancing criteria above minus cost) and identifies a value for this against the actual incremental increase in cost associated with that incremental benefit. *A cost benefit analysis is not an analysis of cost versus protectiveness. Both alternatives under consideration are fully protective of human health and the environment and meet ARARs.*

In this case, alternative 4 presents the incremental benefit of removing 5500 cubic yards of lightly contaminated soils and sediment from the Site, making an on-site vault unnecessary. The specific cost benefit analysis question here is based on whether this benefit is worth the additional \$850,000, which is the approximate cost difference between the two alternatives.

USEPA considers it more cost effective to keep lightly contaminated soils contained on-site for two reasons. First, from an environmental perspective, while lightly contaminated soils will remain on-site in a vault, the principle CPC, B(a)P-TE, is virtually immobile, and the likelihood, of off Site migration or a long term breach in the effectiveness of this remedy is very remote. Secondly, from an economic and development perspective, this Site will be limited to commercial/industrial use, and well development will be prohibited. Therefore, unrestricted use is not an option, making the removal of all surficially contaminated soils off-site unnecessary. Each alternative will equally permit the development of the Site for industrial use. Therefore, USEPA recommends alternative 3 .

C.) Modifying Criteria: State Agency Acceptance and Community Acceptance

OEPA agrees that alternative 3 is the most cost effective remedy and supports its recommendation. A public meeting was held on January 22, 1997 in Dover, Ohio to present the selected remedy. There were no public comments during the meeting and no public comments were received subsequently, indicating that there is no objection to this remedial alternative

IX. SELECTED REMEDY

Alternative 3 is the selected remedy for this Site:

Institutional controls, excavation and off-site thermal treatment of drainage ditch and river sediments, surface soils and impacted perched zone material from the collection trench installation contaminated with greater than 100 ppm B(a)P-TE , and off-site disposal of solidified tarry materials; excavation and on-site disposal of surface water drainage ditch and river sediments, surface soils and impacted perched zone material contaminated with less than 100 ppm B(a)P-TE, and greater than 5 ppm B(a)P-TE; an Ohio RCRA Subtitle D Solid Waste Cap over on-site disposed materials; a soil cover over the remainder of the Site; hydraulic control and collection of perched ground water and natural attenuation and long-term monitoring of shallow ground water. Sampling and analysis of sediments in the river.

The selected remedy is discussed in more detail below.

Institutional Controls

Regional planning indicates that the area will continue to be zoned only for industrial use. Deed restrictions will be placed on the affected property to prohibit Site disturbance and groundwater use. The City of Dover passed Ordinance No. 34-96 which bans installing ground water wells for human consumption throughout the City. Efforts are currently underway to ban all ground water use (i.e., industrial, agricultural, irrigation) in the Site area. The Mayor of Dover has been receptive to banning all ground water use in the Site area, and this proposal was presented to the Dover City Council on August 19, 1996. The current owner of the Site and property south and west has agreed to place deed restrictions on these properties to prohibit ground water use and limit disturbance of the land. The Site will continue to be secured with chain-link fencing and a locked gate until the existing exposure risks at the Site have been addressed.

Excavation and Off-site Thermal Treatment of Surface Water Drainage Ditch Sediments, Surface Soils and Impacted Perched Zone Material with B(a)P-TE greater than 100 ppm

Surficial soils with B(a)P-TE greater than 100 ppm (approximately 2,730 cubic yards) will be excavated and treated in an off-site cement kiln. Impacted surface water drainage ditch sediment (approximately 120 cubic yards) will be excavated and treated in an off-site cement kiln. Impacted perched zone material from the collection trench excavation will be treated in an off-site cement kiln. The trench will be backfilled with high permeability fill and clean spoils from the excavation. The surface water ditch will be lined to eliminate the hydraulic connection between the surface water and perched zone.

Excavation and On-site Disposal of Surface Water Drainage Ditch Sediments, Surface Soils, Impacted Perched Zone Material with B(a)P-TE less than 100 ppm and Greater than 5 ppm

Surficial soils with B(a)P-TE less than 100 ppm and greater than 5 ppm (approximately 5500 cubic yards) will be excavated and placed in the building foundation. The cracks in the floors and walls of the building foundation will be sealed to ensure the integrity of the structure. The Site will be grubbed and graded. Soil, concrete and/or slag removed to facilitate grading activities will be placed in the building foundation. The building foundation will be capped with an Ohio Solid Waste Cap, pursuant to 40 CFR 261 (Subtitle D) and Ohio Administrative Code Section 3745-27-08, and the remainder of the Site will be covered with soil and vegetated.

Off-site Disposal or Recycling of Tarry Materials

The tarry materials will be solidified with lime, cement and/or flyash and will be disposed off-site, or may be recycled as a feedstock. To the extent that these materials are RCRA Characteristic Hazardous Waste, off-site disposal must comply with Land Ban regulations pursuant to 40 CFR Section 268 Subpart D, and with U.S. EPA's off-site Rule, 58 Fed Reg 49200 (September 22, 1993), for disposal in an approved RCRA Subtitle C landfill. Transportation and storage of these

materials would need to comply with 40 CFR 262, and 263 as well. It is estimated that a 20% volume increase would occur due to the solidification process.

The recycling option will depend largely on material handling issues and the ability to segregate coal tar from the soils and sediments. To the extent that these materials are RCRA Characteristic Hazardous Waste, recycling of these materials must comply with Ohio Administrative Code Section 3745-50-311 through 3745-50-315, which govern criteria by which recycling variances to classification as a waste are granted.

Hydraulic Control and Collection of Perched Ground Water

A horizontal trench will be installed within the saturated portion of the perched zone, on top of the underlying clay to a depth of approximately 15 to 18 feet below the surface (approximately 863 feet MSL) to recover perched ground water. The trench will be located in the central portion of the Site and will be approximately 400 linear feet. The trench will be constructed to maximize drainage of perched contaminants while maintaining the integrity of the perched clay zone. Top of clay topography will, for the most part, determine the natural collection point of the trench where perched water will be pumped to an oil/water separator and discharged to the sanitary sewer line that leads to the City of Dover POTW.

A permit will be obtained from the City of Dover to discharge the water recovered from the trench to the POTW. Discharge to the POTW must comply with the POTW pretreatment program, including POTW-specific pollutants, pursuant to 40 CFR 403.5: Discharge to Publicly Owned Treatment Works. The permit will establish appropriate pre-treatment limits pursuant to 40 CFR 403. Any waste to be discharged to the POTW will, if necessary, be treated to satisfy the standards set forth in the permit, prior to discharge. The discharge from the collection trench is expected to be approximately 2,900 to 7,200 gallons per day.

Natural Attenuation and Long-Term Monitoring of Shallow Ground Water

At the present time, no CPC present in the regional aquifer downgradient of the Site exceeds Safe Drinking Water MCLs. CPC degradation and migration will be monitored in the shallow regional ground water to assess the effectiveness of natural attenuation on an on-going basis. Monitoring wells will be in both upgradient and downgradient locations around the Site to achieve these goals.

Sampling and Analysis of Tuscarawas River Sediments to Monitor Ecological Effects

Monitor river sediments in the outfall and immediately downstream for 3-5 years to ensure that there are no risks to the aquatic ecosystem.

X. STATUTORY DETERMINATIONS

US EPA's selected alternative provides the best balance of tradeoffs among the alternatives with respect to the criteria used to evaluate the remedies. Based on the information available at this time, U.S. EPA believes the selected alternative will protect human health and the environment, will comply with ARARs, will be cost-effective, and will utilize permanent solutions and alternative treatment technologies to the maximum extent practicable. The selected alternative also satisfies the preference for treatment as a principal element.

APPENDIX A

**FEDERAL AND STATE APPLICABLE OR RELEVANT AND
APPROPRIATE REGULATIONS**

Appendix A

TABLE C-1

Federal Location-Specific Potential Applicable or Relevant and Appropriate Requirements

Location	Requirement	Prerequisite For Applicability	Citation
Within 61 meters (200 feet) of a fault displaced in Holocene time	New treatment, storage, or disposal of hazardous waste prohibited	RCRA hazardous waste; treatment, storage, or disposal	40 CFR 264.18(a)
Within 100-year floodplain	Facility must be designed, constructed, operated, and maintained to avoid washout	RCRA hazardous waste; treatment, storage, or disposal	40 CFR 264.18(b)
Within floodplain g/	Action to avoid adverse effects, minimize potential harm, restore and preserve natural and beneficial values	Action that will occur in a floodplain, i.e., lowlands, and relatively flat areas adjoining inland and coastal waters and other flood prone areas	Protection of floodplains, g/ (40 CFR 6, Appendix A); Fish and Wildlife Coordination Act (16 USC 661 et seq.); 40 CFR 6.302
Critical habitat upon which endangered species or threatened species depends	Action to conserve endangered species or threatened species, including consultation with the Department of Interior	Determination of presence of endangered or threatened species	Endangered Species Act of 1973 (16 USC 1531 et seq.); 50 CFR Part 200, 50 CFR Part 402 Fish and Wildlife Coordination Act (16 USC 661 et seq.); 33 CFR Parts 320-330.
Wetlands g/	Action to prohibit discharge of dredged or fill material into wetlands without permit	Wetlands as defined in the U.S. Army Corps of Engineers regulations	Clean Water Act section 404; 40 CFR Parts 230, 33 CFR Parts 320-330
	Action to avoid adverse effects, minimize potential harm, and preserve and enhance wetlands, to the extent possible (see discussion in section 3.4.4.1)	Action involving construction of facilities or management of property in wetlands, as defined by 40 CFR Part 6, Appendix A, section 4 (j)	40 CFR Part 6, Appendix A

TABLE C-1 (Cont'd)

Federal Location-Specific Potential Applicable or Relevant and Appropriate Requirements

Location	Requirement	Prerequisite For Applicability	Citation
Area affecting stream or river	Action to protect fish or wildlife	Diversion, channeling or other activity that modifies a stream or river and affects fish or wildlife	Fish and Wildlife Coordination Act (16 USC 661 <u>et seq</u>); 40 CFR 6.302
Within area affecting national wild, scenic, or recreational river	Avoid taking or assisting in action that will have direct adverse effect on scenic river	Activities that effect or may affect any of the rivers specified in section 1276(a)	Wild and Scenic Rivers Act (16 USC 1271 <u>et seq</u> section 7 (a)); 40 CFR 6.302(e)
NAAQS Attainment Areas (Clean Air Act)	New major stationary sources shall apply best available control technology for each pollutant, subject to regulation under the Act, that the source would have potential to emit in significant amounts.	Major stationary sources as identified in 40 CFR section 52.21 (b)(1)(I)(a) that emits, or has the potential to emit, 100 tons per year or more of any regulated pollutant; any other stationary source that emits, or has the potential to emit, 250 tons per year or more of any regulated pollutant.	40 CFR section 52.21(j) (CAA)
	Owner or operator of proposed source or modification shall demonstrate that allowable emissions increases or reductions (including secondary emissions) will not cause or contribute to a violation of the NAAQS or applicable maximum allowable increase over baseline concentrations.		

TABLE C-1 (Cont'd)

Federal Location-Specific Potential Applicable or Relevant and Appropriate Requirements

Location	Requirement	Prerequisite For Applicability	Citation
NAAQS Non Attainment Areas (Clean Air Act)	Source must obtain emission offsets in Air Quality Control Region of greater than one-to-one.	Any stationary facility or source of air pollutants that directly emits, or has the potential to emit, 100 tons per year or more of any air pollutant (including any major emitting facility or source of fugitive emissions of any such pollutants). [CAA §302(j)].	CAA Part D, §173(1)
	Source subject to "lowest achievable emission rate (LAER)" as defined in 40 CFR section 51.18(j)(xiii).		CAA Part D, §173(2)
	All major stationary sources owned or operated by the person in the State are in compliance, or on a schedule for compliance, with all applicable emission standards.		CAA Part D, §173(3)
Historic district, site, building, structure, or object	Avoid impacts on cultural resources. Where impacts are unavoidable, mitigate through design and data recovery.	Properties listed in the National Register of Historic Places, or eligible for such listing.	National Historic Preservation Act (NHPA) 16 CFR Part 470, <u>et seq</u>
Critical habitat of/or an endangered or threatened species	Identify activities that may affect listed species.	Species or habitat listed as endangered or threatened.	Endangered Species Act (ESA) 50 CFR section 402.04
	Actions must not threaten the continued existence of a listed species.		50 CFR section 402.01

TABLE C-1 (Cont'd)

Federal Location-Specific Potential Applicable or Relevant and Appropriate Requirements

Location	Requirement	Prerequisite For Applicability	Citation
Critical habitat of/or an endangered or threatened species (Cont'd)	Actions must not destroy critical habitat.		50 CFR section 402.01
Wild & Scenic Rivers	Determine if project will affect the free-flowing characteristics, scenic, or natural values of a designated river	Any river, and the bordering or adjacent land, designated as "wild and scenic or recreational".	Wild and Scenic Rivers Act (WSRA) 36 CFR section 297.4
	Not authorize any water resources project or any other project that would directly or indirectly impact any designated river without notifying DOE or Forest Service.		
<small>(4) 40 CFR Part 5 Subpart A sets forth EPA policy for carrying out the provisions of Executive Order 11651 (Preservation of Wetlands); Executive orders are binding on the level of U.S. Federal State/ Government for which they are issued.</small>			

TABLE C-2

Federal Action-Specific Potential Applicable or Relevant and Appropriate Requirements

Action (a)	Requirements	Prerequisites for Applicability	Citation
Air Stripping	[CAA requirements to be provided.]		
Capping (See also Closure with Waste in Place for additional associated requirements)	<p>Placement of a cap over waste (e.g., closing a landfill, or closing a surface impoundment or waste pile as a landfill, or similar action) requires a cover designed and constructed to:</p> <ul style="list-style-type: none"> • Provide long-term minimization of migration of liquids through the capped area; • Function with minimum maintenance; • Promote drainage and minimize erosion or abrasion of the cover; • Accommodate settling and subsidence so that the cover's integrity is maintained; and • Have a permeability less than or equal to the permeability of any bottom liner system or natural sub-soils present. 	<p>RCRA hazardous waste placed at site after the effective date of the requirements, or placement of hazardous waste into another unit will make requirements applicable when the waste is being covered with a cap for the purpose of leaving it behind after the remedy is completed. Capping without such placement will not make requirements applicable.</p>	<p>40 CFR 264.228(a) (Surface Impoundments) 40 CFR 264.258(b) (Waste Piles) 40 CFR 264.310(a) (Landfills)</p>
	Eliminate free liquids, stabilize wastes before capping (surface impoundments).		40 CFR 264.228(a)
	Restrict post-closure use of property as necessary to prevent damage to the cover.		40 CFR 264.117(c)
	Prevent run-on and run-off from damaging cover.		40 CFR 264.228(b) 40 CFR 264.310(b)
	Protect and maintain surveyed benchmarks used to locate waste cells (landfills, waste piles).		40 CFR 264.310(b)

TABLE C-2 (Cont'd)

Federal Action-Specific Potential Applicable or Relevant and Appropriate Requirements

Action (a)	Requirements	Prerequisites for Applicability ^{a,c}	Citation
Closure with No Post-Closure Care (e.g., Clean Closure)	General performance standard requires elimination of need for further maintenance and control; elimination of post-closure escape of hazardous waste, hazardous constituents, leachate, contaminated run-off, or hazardous waste decomposition products.	Applicable to land-based unit containing hazardous waste. ^b Applicable to RCRA hazardous waste (listed or characteristic) placed at site after the effective date of the requirements, or placed into another unit. Not applicable to material treated, stored, or disposed only before the effective date of the requirements, or if treated in-situ, or consolidated within area of contamination. Designed for cleanup that will not require long-term management. Designed for cleanup to health-based standards.	40 CFR 264.111
	Disposal or decontamination of equipment, structures, and soils.	May apply to surface impoundments and container or tank liners and hazardous waste residues, and to contaminated soil, including soil from dredging or soil disturbed in the course of drilling or excavation, and returned to land.	40 CFR 264.111 40 CFR 264.178 40 CFR 264.197 40 CFR 264.288 (c)(1) and 40 CFR 264.258
	Removal or decontamination of all waste residues, contaminated containment system components (e.g., liners, dikes), contaminated subsols, and structures and equipment contaminated with waste and leachate, and management of them as hazardous waste.		
	Meet health-based levels at unit.		40 CFR 244.111
Closure with Waste In Place	Eliminate free liquids by removal or solidification. Stabilization of remaining waste and waste residues to support cover.	Applicable to land disposal of hazardous waste. ^b Applicable to RCRA hazardous waste (listed or characteristic) placed at site after the effective date of the requirements, or placed into another unit. Not applicable to material treated, stored, or disposed only before the effective date of the requirements, or if treated in-situ or consolidated within area of contamination.	40 CFR 264.228(a)(2) 40 CFR 264.228(a)(2) 40 CFR 264.258(b)
	Installation of final cover to provide long-term minimization of infiltration (see Capping).		40 CFR 264.310
	30-year post-closure care and groundwater monitoring. ^d		40 CFR 264.310

TABLE 1 (Cont'd)

Federal Action-Specific Potential Applicable or Relevant and Appropriate Requirements

Action (a)	Requirements	Prerequisites for Applicability ^a	Citation
Closure of Land Treatment Units	Maximize degradation, transformation, or immobilization of hazardous constituents within the treatment zone, minimize run-off of constituents, maintain run-on control system and run-off management system, control wind dispersal of hazardous waste, maintain unsaturated zone monitoring, establish vegetative cover, and establish background soil values to determine consistency with permit values.	Closure of land treatment units.	40 CFR 264.280
Consolidation Within a Unit	None applicable. ^a	Consolidation within a unit. ^a	
Consolidation Between Units	With respect to the waste that is moved, see requirements in the following sections: Capping, Closure with Waste in Place, Container Storage, Construction of a New Landfill On-Site, Construction of a New Surface Impoundment On-Site, Incineration (On-Site), Land Treatment, Operation and Maintenance, Tank Storage, and Treatment.	Movement of hazardous waste and placement into another unit.	See Capping, Closure with Waste in Place, Container Storage, Construction of a New Landfill On-Site, Construction of a New Surface Impoundment On-Site, Incineration (On-site), Land Treatment, Operation and Maintenance, Tank Storage, and Treatment in this exhibit.
Container Storage	Containers of RCRA hazardous waste must be: <ul style="list-style-type: none"> • Maintained in good condition; • Compatible with hazardous waste to be stored; and 	Storage of RCRA hazardous waste (listed or characteristic) not meeting small quantity generator criteria held for a temporary period greater than 90 days before treatment, disposal, or storage elsewhere (40 CFR 264.10), in a container (i.e., any portable device in which a material is stored, transported, disposed of, or handled). A generator who accumulates or stores hazardous waste on-site for 90 days or less in compliance with 40 CFR 262.34(a)(1-4) is not subject to full RCRA storage requirements. Small quantity generators are not subject to the 90 day limit (40 CFR 262.34(c),(d), and (e)).	40 CFR 264.171 40 CFR 264.172
	<ul style="list-style-type: none"> • Closed during storage (except to add or remove waste). 		40 CFR 264.173
	Inspect container storage areas weekly for deterioration.		40 CFR 264.174

Federal Action-Specific Potential Applicable or Relevant and Appropriate Requirements

Action (a)	Requirements	Prerequisites for Applicability ^{a,b}	Citation
Container Storage (cont'd)	Place containers on a sloped, crack-free base, and protect from contact with accumulated liquid. Provide containment system with a capacity of 10 percent of the volume of containers of free liquids. Remove spilled or leaked waste in a timely manner to prevent overflow of the containment system.		40 CFR 264.175
	Keep containers of ignitable or reactive waste at least 50 feet from the facility's property line.		40 CFR 264.176
	Keep incompatible materials separate. Separate incompatible materials stored near each other by a dike or other barrier.		40 CFR 264.177
	At closure, remove all hazardous waste and residues from the containment system, and decontaminate or remove all containers, liners.		40 CFR 264.178
	Storage of banned wastes must be in accordance with 40 CFR 268. When such storage occurs beyond one year, the owner/operator bears the burden of proving that such storage is solely for the purpose of accumulating sufficient quantities to allow for proper recovery, treatment, and disposal.		40 CFR 268.50
Construction of New Landfill On-Site (see Closure with Waste in Place).	<u>Minimum Technology Requirements:</u> Install two liners or more, a top liner that prevents waste migration into the liner, and a bottom liner that prevents waste migration through the liner. ¹	RCRA hazardous waste (listed or characteristic) currently being placed in a new, replacement, or expanded landfill.	40 CFR 264.301
	Install leachate collection systems above and between the liners.		40 CFR 264.301
	Construct run-on and run-off control system capable of handling the peak discharge of a 25-year storm.		40 CFR 264.301
	Control wind dispersal of particulates.		40 CFR 264.301
	Operation and maintenance.		40 CFR 264.303-304
	Close each cell with a final cover after the last waste has been received.		40 CFR 264.310

TABLE C-2 (Cont'd)

Federal Action-Specific Potential Applicable or Relevant and Appropriate Requirements

Action (a)	Requirements	Prerequisites for Applicability ^{1,2}	Citation
Construction of New Landfill On-Site (Cont'd)	<p><u>Groundwater Monitoring</u></p> <p>Establish a detection monitoring program (264.98). Establish a compliance monitoring program (264.99) and corrective action monitoring program (264.100) when required by 40 CFR 264.91. All monitoring programs must meet RCRA general groundwater monitoring requirements (264.97)</p>	Creation of a new landfill unit to treat, store, or dispose of RCRA hazardous wastes as part of a response action.	40 CFR 264.91 - 264.100
Construction of a New Surface Impoundment (see Closure with Waste in Place and Closure with no Post-Closure Care)	<p><u>Minimum Technology Requirements:</u></p> <p>Use two liners, a top liner that prevents waste migration into the liner and a bottom liner that prevents waste migration through the liner (throughout the post-closure period).</p>	RCRA hazardous waste (listed or characteristic) currently being placed in a new surface impoundment, or use of replacement or lateral extension of existing landfills or surface impoundments.	40 CFR 264.220
	Design liners to prevent failure due to pressure gradients, contact with the waste, climatic conditions, and the stress of installation and daily operations.		40 CFR 264.221
	Provide a leachate collection system between the two liners.		40 CFR 264.221
	Use a leak detection system that will detect leaks at the earliest possible time.		40 CFR 264.221
Dike Stabilization	Design and operate facility to prevent overtopping due to overfilling: wind and wave action; rainfall; run-on; malfunctions of level controllers, alarms, and other equipment; and human error.	Existing surface impoundment containing hazardous waste, or creation of a new surface impoundment.	40 CFR 264.221
	Construct dikes with sufficient strength to prevent massive failure.		40 CFR 264.221
	Inspect liners and cover systems during and after construction.		40 CFR 264.226
	Inspect weekly for proper operation and integrity of the containment devices.		40 CFR 264.226
	Remove surface impoundment from operation if the dike leaks or there is a sudden drop in liquid level.		40 CFR 264.227

TABLE U-2 (Cont'd)

Federal Action-Specific Potential Applicable or Relevant and Appropriate Requirements

Action (a)	Requirements	Prerequisites for Applicability ^a	Citation	
Dike Stabilization (Continued)	At closure, remove or decontaminate all waste residues and contaminated materials. Otherwise, free liquids must be removed, the remaining wastes stabilized, and the facility closed in the same manner as landfill.		40 CFR 264.226	
	Manage ignitable or reactive wastes so that it is protected from materials or conditions that may cause it to ignite or react.		40 CFR 264.227	
Discharge of Treatment System Effluent	<p>Best Available Technology:</p> <p>Use of best available technology (BAT) economically achievable is required to control toxic and nonconventional pollutants. Use of best conventional pollutant control technology (BCT) is required to control conventional pollutants. Technology-based limitations may be determined on a case-by-case basis.</p>	Point source discharge to waters of the United States. ^{a,b}	40 CFR 122.44(a)	
	<p>Water Quality Standards:</p> <p>Applicable Federally approved State water quality standards must be complied with. These standards may be in addition to or more stringent than other Federal standards under the CWA¹.</p>		40 CFR 122.44 and State regulations approved under 40 CFR 131	
	Discharge limitations must be established at more stringent levels than technology-based standards for toxic pollutants.		40 CFR 122.44 (e)	
	<p>Best Management Practices:</p> <p>Develop and implement a Best Management Practices program to prevent the release of toxic constituents to surface waters.</p>		40 CFR 125.100	
	The Best Management Practices program must:		Discharge to waters of the U.S. ^b	40 CFR 125.106
	<ul style="list-style-type: none"> • Establish specific procedures for the control of toxic and hazardous pollutant spills. 			
	<ul style="list-style-type: none"> • Include a prediction of direction, rate of flow, and total quantity of toxic pollutants where experience indicates a reasonable potential for equipment failure. 			

TABLE C-2 (Cont'd)

Federal Action-Specific Potential Applicable or Relevant and Appropriate Requirements

Action (a)	Requirements	Prerequisites for Applicability ^{1,2}	Citation
Discharge of Treatment System Effluent (Continued)	<ul style="list-style-type: none"> Assure proper management of solid and hazardous waste in accordance with regulations promulgated under RCRA. 		
	<p><u>Monitoring Requirements:</u></p> <p>Discharge must be monitored to assure compliance. Discharge will monitor:</p> <ul style="list-style-type: none"> The mass of each pollutant The volume of effluent Frequency of discharge and other measurements as appropriate 		40 CFR 122.41(i)
	<p>Approved test methods for waste constituent to be monitored must be followed. Detailed requirements for analytical procedures and quality controls are provided.</p>		40 CFR 136.1-136.4
	<p>Sample preservation procedures, container materials, and maximum allowable holding times are prescribed.</p>		
	<p>Comply with additional substantive conditions such as:</p>		40 CFR 122.41 ¹⁰
	<ul style="list-style-type: none"> Duty to mitigate any adverse effects of any discharge; and 		
	<ul style="list-style-type: none"> Proper operation and maintenance of treatment systems. 		
Discharge to Publicly Owned Treatment Works (POTW) (off-site activity, see Footnote 1).	<p>Discharge of pollutants that pass-through the POTW without treatment, interfere with POTW operation, contaminate POTW sludge, or endanger health/safety of POTW workers, is prohibited.</p>	Indirect discharge to a POTW.	40 CFR 403.5
	<p>Specific prohibitions preclude the discharge of pollutants to POTWs that:</p>		
	<ul style="list-style-type: none"> Create a fire or explosion hazard in the POTW; 		
	<ul style="list-style-type: none"> Will cause corrosive structural change to POTW; 		
	<ul style="list-style-type: none"> Obstruct flow resulting in interference; 		
<ul style="list-style-type: none"> Are discharged at a flow rate and/or concentration that will result in interference; and 			

Federal Action-Specific Potential Applicable or Relevant and Appropriate Requirements

Action (a)	Requirements	Prerequisites for Applicability ^a	Citation
Discharge to Publicly Owned Treatment Works (POTW) (off-site activity, see Footnote j) (Continued).	<ul style="list-style-type: none"> ● Increase the temperature of waste-water entering the treatment plant that would result in interference, but in no case raise the POTW influent temperature above 104°F (40°C). 		
	<ul style="list-style-type: none"> ● Discharge must comply with local POTW pretreatment program, including POTW-specific pollutants, spill prevention program requirements, and reporting and monitoring requirements. 		40 CFR 403.5 and local POTW regulations
	<ul style="list-style-type: none"> ● RCRA permit-by-rule requirements (including corrective action where the NPDES permit was issued after November 8, 1984) must be complied with for discharges of RCRA hazardous wastes to POTWs. 	Transport of RCRA hazardous wastes to POTWs by truck, rail, or dedicated pipe (i.e., pipe solely dedicated for hazardous waste [as defined in 40 CFR 264] which discharges from within the boundaries of the CERCLA site to within the boundaries of the POTW).	40 CFR 270.60
Discharge of Dredge and Fill Material to Waters of the U.S. or Ocean Waters	The four conditions that must be satisfied before dredge and fill is an allowable alternative are:	Capping, dike stabilization, construction of beams and levees, and disposal of contaminated soil, waste material or dredged material are examples of activities that may involve a discharge of dredged or fill material.	40 CFR 230 33 CFR 320-330
	<ul style="list-style-type: none"> ● There must be no practical alternative. 		
	<ul style="list-style-type: none"> ● Discharge of dredged or fill material must not cause a violation of State water quality standards, violate any applicable toxic effluent standards, jeopardize an endangered species, or injure a marine sanctuary. 		
	<ul style="list-style-type: none"> ● No discharge shall be permitted that will cause or contribute to significant degradation of the water. 		
	<ul style="list-style-type: none"> ● Appropriate steps to minimize adverse effects must be taken. 		
	Determine long- and short-term effects on physical, chemical, and biological components of the aquatic ecosystem.		
Dredging	Removal of all contaminated soil.	RCRA hazardous waste placed at site after the effective date of the requirements, or placed into another unit.	See Closure in this Exhibit.

TABLE C-2 (Cont'd)

Federal Action-Specific Potential Applicable or Relevant and Appropriate Requirements

Action (a)	Requirements	Prerequisites for Applicability ^a	Citation
Dredging (Cont'd)	Dredging must comply with Section 10 of the Rivers and Harbors Act and U.S. Army Corps of Engineers regulations.	Dredging in navigable waters of the United States.	33 U.S.C. 403 33 CFR 320-330
Excavation	Movement of excavated materials to new location and placement in or on land will trigger land disposal restrictions for the excavated waste or closure requirements for the unit in which the waste is being placed.	Materials containing RCRA hazardous wastes subject to land disposal restrictions are placed in another unit.	40 CFR 268 (Subpart D)
	Area from which materials are excavated may require cleanup to levels established by closure requirements.	RCRA hazardous waste placed at site after the effective date of the requirements.	See Closure in this Exhibit.
Gas Collection	[CAA requirements to be provided.]		
GroundWater Diversion	Excavation of soil for construction of slurry well may trigger closure or land disposal restrictions.	Materials containing RCRA hazardous waste subject to land disposal restrictions are placed into another unit.	See Consolidation in this Exhibit.
Incineration	Analyze the waste feed.	RCRA hazardous waste.	40 CFR 264.341
	Dispose of all hazardous waste and residues, including ash, scrubber water, and scrubber sludge.		40 CFR 264.351
	No further requirements apply to incinerators that only burn wastes that are listed as hazardous solely by virtue of combination with other wastes, and if the waste analysis demonstrates that no Appendix VII constituent is present that might reasonably be expected to be present.		40 CFR 264.340
	Performance standards for incinerators:	RCRA hazardous waste.	40 CFR 264.343
	<ul style="list-style-type: none"> • Achieve a destruction and removal efficiency of 99.99 percent for each principal organic hazardous constituent in the waste feed and 99.9999 percent for dioxins: 		
	<ul style="list-style-type: none"> • Reduce hydrogen chloride emissions to 1.8 kg/hr or 1 percent of the HCl in the stack gases before entering any pollution control devices; and 		40 CFR 264.342
	<ul style="list-style-type: none"> • Not release particulate in excess of 180 mg/dscm corrected for amount of oxygen in stack gas. 		40 CFR 264.343
Monitoring of various parameters during operation of the incinerator is required. These parameters include:			

TABLE C-2 (Cont'd)

Federal Action-Specific Potential Applicable or Relevant and Appropriate Requirements

Action (a)	Requirements	Prerequisites for Applicability ^{2,3}	Citation
Incineration (cont'd)	<ul style="list-style-type: none"> • Combustion temperature; 		
	<ul style="list-style-type: none"> • Waste feed rate; 		
	<ul style="list-style-type: none"> • An indicator of combustion gas velocity; and 		
	<ul style="list-style-type: none"> • Carbon monoxide. 		
	Control fugitive emissions either by:		40 CFR 264.345
	<ul style="list-style-type: none"> • Keeping combustion zone sealed or • Maintaining combustion-zone pressure lower than atmospheric pressure 		
	Utilize automatic cutoff system to stop waste feed when operating conditions deviate.		
	Special performance standard for incineration of PCBs:	Liquid and non-liquid PCBs at concentrations of 50 ppm or greater.	40 CFR 761.70
	<ul style="list-style-type: none"> • Achieve a destruction and removal efficiency of 99.9999 percent; • Either 2 second dwell time at 1,200 degrees C^o (± 100) and 3 percent excess oxygen in stack gas; or 1.5 second dwell time at 1,600 degrees C. and 2 percent excess oxygen in stack gas; and • For non-liquid PCBs, mass air emissions from the incinerator shall be no greater than 0.001 g. KB per kg of the PCBs entering the incinerator. 		
Land Treatment	Prior to land treatment, the waste must be treated to BDAT levels or meet a no migration standard.	RCRA hazardous waste being treated or placed into another unit.	
	Ensure that hazardous constituents are degraded, transformed, or immobilized within the treatment zone.		40 CFR 264.271
	Maximum depth of treatment zone must be no more than 1.5 meters (5 feet) from the initial soil surface and more than 1 meter (3 feet) above the seasonal high water table.		40 CFR 264.271

TABLE C-2 (cont'd)

Federal Action-Specific Potential Applicable or Relevant and Appropriate Requirements

Action (a)	Requirements	Prerequisites for Applicability ^{1,2}	Citation
Land Treatment (cont'd)	Demonstrate that hazardous constituents for each waste can be completely degraded, transformed, or immobilized in the treatment zone.		40 CFR 264.271
	Minimize run-off of hazardous constituents.		40 CFR 264.273
	Maintain run-on/run-off control and management system		40 CFR 264.273
	Special application conditions if food-chain crops are grown in or on treatment zone.		40 CFR 264.276
	Unsaturated zone monitoring.		40 CFR 264.278
	Special requirements for ignitable or reactive waste.		40 CFR 264.281
	Special requirements for incompatible wastes.		40 CFR 264.282
	Special testing and location requirements for certain hazardous wastes.	RCRA waste #s FO20, FO21, FO22, FO23, FO26, FO27 (dioxin-containing wastes).	40 CFR 264.283
Operation and Maintenance (OEM)	30-year post-closure care to ensure that site is maintained and monitored.	Land disposal closure.	40 CFR 264.310
Placement of Liquid Waste in Landfill	<u>Liquids in Landfills Prohibition:</u> No bulk or non-containerized liquid hazardous waste or hazardous waste containing free liquids may be disposed of in landfills.	Placement of a bulk or non-containerized RCRA hazardous waste in a landfill.	40 CFR 264.314
	Containers holding free liquids may not be placed in a landfill unless the liquid is mixed with an absorbent or solidified.		40 CFR 264.314
Placement of Waste in Land Disposal Unit	<u>Land Disposal Restrictions:</u> Attain land disposal "treatment standards" before putting waste into landfill in order to comply with land ban restrictions. A treatment standard can be either: (1) a concentration level to be achieved (performance-based) or (2) a specified technology that must be used (technology-based). If the standard is performance-based, any technology can be used to achieve the standard. (See Treatment when Waste will be Land Disposed.)	Placement of RCRA hazardous waste in a landfill, surface impoundment, waste pile, injection well, land treatment facility, salt dome formation, salt bed formation, or underground mine or cave.	40 CFR 268 (Subpart D)

Federal Action-Specific Potential Applicable or Relevant and Appropriate Requirements

Action (a)	Requirements	Prerequisites for Applicability ^{1,2}	Citation
Slurry Wall	Excavation of soil for construction of slurry wall may trigger land disposal restrictions.	Material containing RCRA hazardous waste subject to land disposal restrictions are placed in another unit. (See Treatment section for LDR schedule. Also see Consolidation, Excavation sections in this Exhibit.)	
Surface Water Control	Prevent run-on and control and collect run-off from a 24-hour 25-year storm (waste piles, land treatment facilities, landfills).	RCRA hazardous waste treated, stored or disposed after the effective date of requirements.	40 CFR 264.251(c),(d) 40 CFR 264.273(c),(d) 40 CFR 264.301(c),(d)
	Prevent over-topping of surface impoundment.		40 CFR 264.221(c)
Tank Storage (On-Site)	Tanks must have sufficient structural strength to ensure that they do not collapse, rupture, or fail.	Storage of RCRA hazardous waste (listed or characteristic) not meeting small quantity generator criteria held for a temporary period greater than 90 days before treatment, disposal or storage elsewhere (40 CFR 264.10), in a tank (i.e., any portable device in which a material is stored, transported, disposed of, or handled). A generator who accumulates or stores hazardous waste on site for 90 days or less in compliance with 40 CFR 262.34(a)(1-4) is not subject to full RCRA storage requirements. Small quantity generators are not subject to the 90 day limit (40 CFR 262.34(c), (d), and (e)).	40 CFR 264.190
	Waste must not be incompatible with the tank material unless the tank is protected by a liner or by other means.		40 CFR 264.191
	Tanks must be provided with secondary containment and controls to prevent overflowing, and sufficient freeboard maintained in open tanks to prevent overtopping by wave action or precipitation.		40 CFR 264.193 - 194
	Inspect the following: overflowing control, control equipment, monitoring data, waste level (for uncovered tanks), tank condition, above-ground portions of tanks (to assess their structural integrity), and the area surrounding the tank (to identify signs of leakage).		40 CFR 264.195
	Repair any corrosion, crack, or leak.		40 CFR 264.196

TABLE 1 (Cont'd)

Federal Action-Specific Potential Applicable or Relevant and Appropriate Requirements

Action (a)	Requirements	Prerequisites for Applicability ^{1,2}	Citation
Tank Storage (On-Site) (cont'd)	At closure, remove all hazardous waste and hazardous waste residues from tanks, discharge control equipment, and discharge confinement structures.		40 CFR 264.197
	Store ignitable and reactive waste so as to prevent the waste from igniting or reacting. Ignitable or reactive wastes in covered tanks must comply with buffer zone requirements in "Flammable and Combustible Liquids Code," Tables 2-1 through 2-6 (National Fire Protection Association, 1976 or 1981).		40 CFR 264.198
	<p><u>Storage Prohibitions:</u></p> <p>Storage of banned wastes must be in accordance with 40 CFR 268. When such storage occurs beyond one year, the owner/operator bears the burden of proving that such storage is solely for the purpose of accumulating sufficient quantities to allow for proper recovery, treatment and disposal</p>		40 CFR 268.50
Treatment (in a unit)	Design and operating standards for unit in which hazardous waste is treated. (See citations at right for design and operating requirements for specific unit.)	Treatment of hazardous waste in a unit.	40 CFR 264.190 - 264.192 (Tanks) 40 CFR 264.221 (Surface Impoundments) 40 CFR 264.251 (Waste Piles) 40 CFR 264.273 (Land Treatment Unit) 40 CFR 264.343 -345 (Incinerators) 40 CFR 264.601 (Miscellaneous Treatment Units) 40 CFR 265.373 (Thermal Treatment Units)

TABLE C-2 (Cont'd)

Federal Action-Specific Potential Applicable or Relevant and Appropriate Requirements

Action (a)	Requirements	Prerequisites for Applicability ^a	Citation
<p>Treatment (when Waste will be Land Disposed)</p>	<p>Treatment of waste subject to ban on land disposal must attain levels achievable by best demonstrated available treatment technologies (BDAT) for each hazardous constituent in each listed waste, if residual is to be land disposed. If residual is to be further treated, initial treatment and any subsequent treatment that produces residual to be treated need not be BDAT, if it does not exceed value in CCWE (Constituent Concentration in Waste Extract) Table for each applicable water. (See 51 FR 40642, November 6, 1986).</p>	<p>Disposal of contaminated soil and debris resulting from CERCLA response action or RCRA corrective actions is <u>not</u> subject to land disposal prohibitions and/or treatment standards for solvents, dioxins, or California list wastes until November 8, 1990 (and for certain first third wastes until August 8, 1990).</p>	<p>40 CFR 268.10 40 CFR 268.11 40 CFR 268.12 40 CFR 268.41 40 CFR 268 (Subpart D)</p>
		<p>All wastes listed as hazardous in 40 CFR Part 261 as of November 8, 1984, except for spent solvent wastes and dioxin-containing wastes, have been ranked with respect to volume and intrinsic hazards, and are scheduled for land disposal prohibition and/or treatment standard determinations as follows:</p>	<p>51 FR 40641 51 FR 25760</p>
		<p>Solvents and dioxins Nov. 8, 1988 California list wastes July 8, 1987 One-third of all ranked Aug. 8, 1988 and hazardous wastes Underground injection Aug. 8, 1988 of solvents and dioxins and California list wastes CERCLA response action Nov. 8, 1988 and RCRA corrective action soil and debris Two-thirds of all ranked July 8, 1989 listed hazardous wastes All remaining ranked and May 8, 1990 listed hazardous wastes Identified by characteristic under RCRA section 3001 Any hazardous waste Within 6 mos. listed or identified of the date of under RCRA section identification RCRA section 3001 or listing after November 8, 1984.</p>	

TABLE C-2 (Cont'd)

Federal Action-Specific Potential Applicable or Relevant and Appropriate Requirements

Action (a)	Requirements	Prerequisites for Applicability ^a	Citation
Treatment (when waste will be land disposed) (cont'd)	BDAT standards for spent solvent wastes and dioxin-containing wastes are based on one of four technologies or combinations: for waste waters, (1) steam stripping, (2) biological treatment, or (3) carbon absorption (alone or in combination with (1) or (2)); and for all other wastes, (4) incineration. Any technology may be used however, if it will achieve the concentration levels specified.		40 CFR 268.30 RCRA Sections 3004(d)(3),(e)(3) 42 U.S.C. 6924(d)(3),(e)(3)
Waste Pile	Use a single liner and leachate collection system.	RCRA hazardous waste, non-containerized accumulation of solid, nonflammable hazardous waste that is used for treatment or storage.	40 CFR 264.251
	Waste put into waste pile subject to land ban regulations (see Appendix of this manual)		40 CFR 268.2
New Source Performance Standards (Clean Air Act) Incineration (general)	Particulate emissions shall be less than 0.08 grains per dry standard cubic foot corrected to 12% carbon dioxide.	Incinerator burning solid waste, more than 50% of which is municipal-type waste, for the purpose of reducing waste volume by removing combustible matter.	40 CFR Section 60.52 (CAA)
New Source Performance Standards (Clean Air Act) (cont'd)			

TABLE C-2 (Cont'd)

Federal Action-Specific Potential Applicable or Relevant and Appropriate Requirements

Action (a)	Requirements	Prerequisites for Applicability ^a	Citation
Statutory Gas Turbines	<p>Standard for NO_x emissions.</p> <p>SO₂ emissions shall be less than 0.015% by volume at 15% oxygen and on a dry basis.</p>	Stationary gas turbines with load heat input equal to or greater than 10.7 gigajoules per hour, based on the lower heating value of the fuel fired.	<p>40 CFR Section 60.332 (CAA)</p> <p>40 CFR Section 60.333 (CAA)</p>
<p>a. Action alternatives from ROD keyword index. <u>EY1986 Record of Decision Annual Report</u>. January 1987, Hazardous Site Control Division, EPA.</p> <p>b. Requirements have been proposed but not promulgated for air stripping, hybrid closure, gas collection and miscellaneous unit treatment. When these regulations are promulgated, they will be included in the matrix.</p> <p>c. Some action-specific requirements listed may be relevant and appropriate even if RCRA definitions of storage, disposal, or hazardous waste are not met, or if the waste at the site is similar to but not identifiable as a RCRA hazardous waste.</p> <p>d. Regional administrator may revise length of post-closure care period (40 CFR 264.117).</p> <p>e. In many cases, there are no defined "units" at a CERCLA site. Instead, there are areas of contamination with differing concentration levels (including hot spots) of hazardous substances, pollutants, or contaminants. When RCRA hazardous wastes are moved into or out of an area of contamination, RCRA disposal requirements are applicable to the waste being managed and certain treatment, storage, or disposal requirements (such as for closure) are applicable to the area where the waste is received.</p> <p>f. Landfill units meeting the requirements of 40 CFR 264.301 (f) are not subject to RCRA minimum technology requirements.</p> <p>g. "Waters of the U.S." is defined broadly in 40 CFR 122.2 and includes essentially any water body and wetland.</p> <p>h. Section 121 of SARA exempts on-site CERCLA activities from obtaining permits. However, the substantive requirements of a law or regulation must be met. In particular, on-site discharges to surface waters are exempt from procedural NPDES permit requirements. Off-site dischargers would be required to apply for and obtain an NPDES permit.</p> <p>i. Federal Water Quality Criteria may be relevant and appropriate depending on the designated or potential use of the water, the media affected, the purposes of the criteria, and current information (CERCLA 1121(d)(2)(B)(i)). Federal Water Quality Criteria for the protection of aquatic life will be relevant and appropriate when environmental factors (e.g., protection of aquatic organisms) are being considered. (50 FR 30784 [July 28, 1985]).</p> <p>j. Discharge to POTWs is considered an off-site activity; therefore, requirements related to discharge to a POTW are not ARAPs, but are included in this exhibit for reference. Off-site actions must comply with all legally applicable requirements, both substantive and administrative. The concept of "relevant and appropriate" is not available for off-site actions.</p>			

TABLE C-3

Federal Chemical-Specific Potential Applicable or Relevant and Appropriate Requirements

Chemical Name	Requirements	Prerequisites for Applicability	Citation
NAAQS^(a) (Clean Air Act)			
Carbon monoxide	Not to exceed 9 ppm over 8-hour period and not to exceed 35 ppm over a 1-hour period (primary); no secondary standards.	Major stationary and mobile sources.	40 CFR Part 50 (CAA)
Lead	Not to exceed 1.5 µg/m ³ based on a quarterly average.	Major stationary sources.	40 CFR Part 50 (CAA)
Nitrogen dioxide	Not to exceed 0.053 ppm annually.	Major stationary and mobile sources.	40 CFR Part 50 (CAA)
Particulate matter (PM ₁₀)	Not to exceed 50 µg/m ³ annually. Not to exceed 150 µg/m ³ /24-hour period.	Major stationary sources.	40 CFR Part 50 (CAA)
Ozone	Not to exceed 0.12 ppm/hr.	Major stationary and mobile sources.	40 CFR Part 50 (CAA)
Sulfur oxides	Not to exceed 0.03 ppm annually. Not to exceed 0.14 ppm/24-hour period. Not to exceed 0.5 ppm/3-hour period.	Major stationary sources.	40 CFR Part 50 (CAA)
<small>(a) NAAQS are translated into source-specific requirements in State Implementation Plans (SIPs).</small>			

TABLE C-4
State of Ohio ARARs

Title or Subject of Regulation	Code Section/ Paragraph	Description of Regulation	Application of Regulation	ARAR Type
Prohibits Violations of Air Pollution Control Rules	3704.05/A-1	Prohibits emission of an air contaminant in violation Sec. 3704 or any rules, permit, order or variance issued pursuant to that section of the ORC.	May pertain to any site where emissions of an air contaminant occurs either as a pre-existing condition of the site or as a result of remedial activities. Should be considered for virtually all sites.	Chemical Action
Exemptions to Solid and Hazardous Waste T/S/D Requirements	3734.02/(G)	Provides authority and conditions by which the director may exempt any person from permitting or other requirements governing the generation, storage, treatment, transport or disposal of solid or hazardous waste.	Pertains to any site at which solid or hazardous waste has come to be located.	Action
"Digging" where HAZ or Solid Waste Facility was Located	3734.02/(H)	Filling, grading, excavating, building, drilling or mining on land where hazardous waste or solid waste facility was operated is prohibited without prior authorization from the director of the Ohio EPA.	Pertains to any site at which hazardous or solid waste has come to be located.	Location Action
Air Emissions from Hazardous Waste Facilities	3734.02/(I)	No hazardous waste facility shall emit any particulate matter, dust, fumes, gas, mist, smoke, vapor or odorous substance that interferes with the comfortable enjoyment of life or property or is injurious to public health.	Pertains to any site at which hazardous waste will be managed such that air emissions may occur. Consider for sites that will undergo movement of earth or incineration.	
Hazardous Waste Facility Environmental Impact	3734.05/(D)	A hazardous waste facility installation and operation permit shall not be approved unless it proves that the facility represents the minimum adverse environmental impact, considering the state of available technology, the nature and economics of various alternatives and other pertinent considerations.	Pertains to all sites at which hazardous waste has come to be located and/or at which hazardous waste will be treated, stored or disposed of. May function as siting criteria	

TABLE C-4 (Cont'd)

State of Ohio ARARs

Title or Subject of Regulation	Code Section/ Paragraph	Description of Regulation	Application of Regulation	ARAR Type
Hazardous Waste Siting Criteria	3734.05/(D)6.d.g.h	<p>(D)6.d. A hazardous waste facility installation and operation permit shall not be approved unless it proves that the facility represents the minimum risk of all of the following:</p> <ul style="list-style-type: none"> (i) contamination of ground and surface waters (ii) fires or explosions from treatment, storage disposal methods (iii) accident during transportation (iv) impact on public health and safety (v) air pollution (vi) soil contamination <p>(D)6.g.h. Prohibits the following locations for treatment, storage and disposal of acute hazardous waste:</p> <ul style="list-style-type: none"> (i) within 2,000 feet of any residence, school, hospital, jail or prison; occurring (ii) any naturally occurring wetland (iii) any flood hazard area (iv) within any state park or national park or recreation area 	Pertains to all sites at which hazardous waste has come to be located and/or at which hazardous waste will be treated, stored or disposed of. May function as siting criteria.	Action Location
Prohibition of Nuisances	3767.14	Prohibition against throwing refuse, oil, or filth into lakes, streams, or drains.	Pertains to all sites located adjacent to lakes, streams, or drains.	Action Chemical
Acts of Pollution Prohibited	6111.04	Pollution of waters of the state is prohibited.	Pertains to any site which has contaminated on-site ground or surface water or will have a discharge to on-site surface or groundwater.	Action

TABLE C-4 (Cont'd)

State of Ohio ARARs

Title or Subject of Regulation	Code Section/ Paragraph	Description of Regulation	Application of Regulation	ARAR Type
Rules Requiring Compliance with National Effluent Stds	6111.04.2	Establishes regulations requiring compliance with national effluent standards.	Pertains to any site which will have a point source discharge.	Action
Water Pollution Control Requirements - Duty to Comply	6111.07/A,C	Prohibits failure to comply with requirements of sections 6111.01 to 6111.08 or any rules, permit or order issued under those sections.	Pertains to any site which has contaminated ground water or surface water or will have a discharge to on-site surface or groundwater.	Action
Analytical and Collection Procedures	3745-1-03	Specifies analytical methods and collection procedures for surface water discharges.	Pertains to both discharges to surface waters as a result of remediation and any on-site surface waters affected by site conditions.	Action
The "Five Freedoms" for Surface Water	3745-1-04/A,B,C,D,E	All surface waters of the state shall be free from: A) Objectional suspended solids. B) Floating debris, oil and scum. C) Materials that create a nuisance. D) Toxic, harmful or lethal substances. E) Nutrients that create nuisance growth.	Pertains to both discharges to surface waters as a result of remediation and any on-site surface waters affected by site conditions.	Chemical
Antidegradation Policy for Surface Water	3745-1-05/A,B,C	Prevents degradation of surface water quality below designated use or existing water quality. Existing instream uses shall be maintained and protected. The most stringent controls for treatment shall be required by the director to be employed for all new and existing point source discharges. Prevents any degradation of "State Resource Waters."	Requires that best available technology (BAT) be used to treat surface water discharges. DWQPA uses this rule to set standards when existing water quality is better than the designated use.	Chemical
Mixing Zones for Surface Water	3745-1-06/A,B,	(A) Presents the criteria for establishing non-thermal mixing zones for point source discharges (B) presents the criteria for establishing thermal mixing zones for point source discharges.	Applied as a term or discharge permit to install (PT1).	Chemical

TABLE C-4 (Cont'd)

State of Ohio ARARs

Title or Subject of Regulation	Code Section/ Paragraph	Description of Regulation	Application of Regulation	ARAR Type
Water Quality Criteria	3745-1-07/C	Establishes water quality criteria for pollutants which do not have specific numerical or narrative criteria identified in Tables 7-1 through 7-15 of the rule.	Pertains to both discharges to surface waters as a result of remedial action and any surface waters affected by site conditions.	Chemical Action
3745-1-24 on P88 Malfunctions and Pollution Maintenance of Air Control Equipment	3745-15-06/A1,A2	Establishes scheduled maintenance and specifies when pollution source must be shut down during maintenance.	Pertains to any site which utilizes or will utilize air pollution control equipment on site.	Action
Air Pollution Nuisances Prohibited	3745-15-07/A	Defines air pollution nuisance as the emission or escape into the air from any source(s) of smoke, ashes, dust, dirt, grime, acids, fumes, gases, vapors, odors and combinations of the above that endanger health, safety or welfare of the public or cause personal injury or property damage, such as nuisances are prohibited.	Pertains to any site which causes, or may reasonably cause, air pollution nuisances. Consider for sites that will undergo excavation, demolition, cap installation, methane production, clearing and grubbing, water treatment, incineration and waste fuel recovery.	Action
Stack Height Requirements	3745-16-02/B,C	Establishes allowable stack height for air contaminant sources based on good engineering practice.	Pertains to any site that has or will have an air contaminant source on-site (particulate, dust, fumes, gas, mist, smoke, vapor, odors) emitted from a stack. Consider for remedies incorporating incineration, waste fuel recovery and wastewater treatment.	Action
Particulate Ambient Air Quality Standards	3745-17-02/A,B,C	Establishes specific standards for total suspended particulates.	Pertains to any site that may emit measurable quantities of particulate matter (both stack and fugitive). Consider for sites that will undergo excavation, demolition, cap installation, clearing and grubbing, incineration and waste fuel recovery.	Chemical

TABLE C-4 (Cont'd)

State of Ohio ARARs

Title or Subject of Regulation	Code Section/ Paragraph	Description of Regulation	Application of Regulation	ARAR Type
Particulate Non-Degradation Policy	3745-17-05	Degradation of air quality in any area where air quality is better than required by 3745-17-02 is prohibited.	Pertains to sites in certain locations that may emit or allow the escape of particulates (both stack and fugitive). Consider for sites that will undergo excavation, demolition, cap installation, clearing and grubbing, incineration.	Chemical Location
Visible Particulate Emission Control	3745-17.07/A-D	Specifies the allowable opacity for particulate emissions; provides exceptions for uncombined water, start-up/shutdown of fuel burning equipment, malfunctions.	Pertains to any emission of particulate from a stack. Consider for incineration and fuel burning.	Chemical
Emission Restrictions for Fugitive Dust	3745-17-08/ A1,A2,B,D,	All emissions of fugitive dust shall be controlled.	Pertains to sites which may have fugitive emissions (non-stack) or dust. Consider for sites that will undergo grading, loading operations, demolition, clearing and grubbing and construction.	Action
Incineration Particulate Emission and Odor Restrictions	3745-17-09/A,B,C	Establishes particulate emission limitations and design-operation requirements to prevent the emission of objectionable odors.	Pertains to any remedy incorporating incineration.	Action
Fuel Burning Particulate Emission Restrictions	3745-17-10/A,B,C,	Establishes particulate emission limitations for fuel burning equipment.	Pertains to any remedy incorporating fuel burning (waste fuel recovery).	Action
Sulfur Dioxide Ambient Air Quality Standards	3745-18-02/A,B,C,D	Establishes primary and secondary ambient air quality standards for sulfur dioxide.	Pertains to any site that emits or will emit sulfur dioxide. Consider for incineration, fuel burning (waste fuel recovery).	Action Chemical
Sulfur Dioxide Measurement Methods and Procedures	3745-18-04/ A,B,C,E,F,	Specifies testing methods and procedures for sulfur dioxide emissions compliance testing	Pertains to any site that will emit sulfur dioxide. Consider for sites that will utilize incineration or fuel recovery (waste fuel recovery).	Action Chemical

TABLE C-4 (Cont'd)

State of Ohio ARARs

Title or Subject of Regulation	Code Section/ Paragraph	Description of Regulation	Application of Regulation	ARAR Type
Sulfur Dioxide Ambient Monitoring Requirements	3745-18-05/A	The director of the Ohio EPA may require any source of sulfur dioxide emissions to install, operate and maintain monitoring devices, maintain records and file reports.	Pertains to any site that emits or will emit sulfur dioxide. Consider for incineration, fuel burning (waste fuel recovery).	Action Chemical
Sulfur Dioxide Emission Limit Provisions	3745-18-06/A-G	Establishes general limit provisions for sulfur dioxide.	Pertains to any site that will emit sulfur dioxide. Consider for sites that will undergo incineration or fuel burning (waste fuel recovery).	Action Chemical
Ambient Air Quality Standards and Guidelines	3745-21-02/A,B,C	Establishes specific air quality standards for carbon monoxide, ozone and non-methane hydrocarbons.	Pertains to any site which will emit carbon oxides, ozone or non-methane hydrocarbons. Consider for sites that will undergo water treatment. Incineration and fuel burning (waste fuel recovery)	Chemical Action
Methods of Ambient Air Quality Measurement	3745-21-03/B,C,D.	Specifies measurement methods to determine ambient air quality for the following constituents: carbon monoxide, ozone and non-methane hydrocarbons.	Pertains to any site which will emit carbon monoxide, ozone or non-methane hydrocarbons. Consider for sites where treatment systems will result in air emissions.	Chemical Action
Non-Degradation Policy	3745-21-05	Prohibits significant and avoidable deterioration of air quality.	Pertains to any site which will emit carbon oxides and non-methane hydrocarbons. Consider for sites that will undergo water treatment, incineration and fuel burning (waste fuel recovery).	Action
Organic Materials Emission Control: Stationary Sources	3745-21-07/ A,B,G,I,J	Requires control of emissions of organic materials from stationary sources. Requires best available technology.	Pertains to any site which is emitting or will emit organic material. Consider for sites that will undergo water treatment (air stripping). Incineration and fuel burning (waste fuel recovery).	Action Chemical

TABLE C-4 (Cont'd)

State of Ohio ARARs

Title or Subject of Regulation	Code Section/ Paragraph	Description of Regulation	Application of Regulation	ARAR Type
Carbon Monoxide Emission Control: Stationary Sources	3745-21-08/A-E	Requires any stationary source of carbon monoxide to minimize emissions by the use of best available control technologies and operating practices in accordance with best current technology.	Pertains to any site which is emitting or will emit carbon monoxide. Consider for sites that will undergo water treatment, incineration and fuel burning (waste fuel recovery).	Action Chemical
VOC Emissions Control: Stationary Sources	3745-21-09	Establishes limitations for emissions of volatile organic compounds from stationary sources.		Action
Nitrogen Dioxide Ambient Air Quality Standards	3745-23-01	Establishes a maximum ambient air quality standard for nitrogen dioxide.	Pertains to any site which is emitting or will emit nitrogen dioxide. Consider for sites that will undergo water treatment, incineration and fuel burning (waste fuel recovery).	Chemical Action
Measurement Methods for Nitrogen Dioxide	3745-23-02/A,B	Specifies methods of measurement for nitrogen dioxide to determine ambient air quality.	Pertains to any site which will emit nitrogen dioxide. Consider for sites where treatment systems may result in nitrogen dioxide emissions, esp. thermal treatment systems.	Action Chemical
Nitrogen Dioxide Nondegradation Policy	3745-23-04	Prohibits the significant and avoidable deterioration of air quality by the release of nitrogen dioxide emissions.	Pertains to any site which is emitting or will emit nitrogen dioxide. Consider for sites that will undergo water treatment, incineration and fuel burning (waste fuel recovery).	Action Chemical
Nitrogen Oxides Emission Controls: Stationary Source	3745-23-06	Requires that all stationary sources of nitrogen oxide minimize emissions by the use of the latest available control techniques and operating practices in accordance with best current technology. Establishes limit for nitrogen oxide emissions from combustion.	Pertains to any site which will emit nitrogen oxides. Consider for sites where treatment systems will result in nitrogen oxide emissions, esp. thermal treatment.	Action Chemical

TABLE C-4 (Cont'd)

State of Ohio ARARs

Title of Subject of Regulation	Code Section/ Paragraph	Description of Regulation	Application of Regulation	ARAR Type
Emission Control Action Programs	3745-25-03	Requires preparation for air pollution alerts, warnings and emergencies.	Pertains to any site which is emitting or may emit air contaminants.	Action
Construction Specifications for Sanitary Landfills	3745-27-09/C,D-H	Specifies the minimum requirements for the soil/clay layers, granular drainage layer, geosynthetics, leachate management system, gas monitoring system, etc. Also establishes construction requirements for facilities to be located in geologically unfavorable areas.	Pertains to any new solid waste disposal facility created on site and any expansions to existing solid waste landfills. Portions also pertain to areas of contamination that are capped per solid waste rules. May serve as siting criteria.	Action
Sanitary Landfill Operational Requirements	3745-27-09/See D 10 week case.	Specifies operational requirements for solid waste landfills. Includes leachate and air emission management, filling of new phase, access roads, daily cover, burning waste, layer thickness, disposal of liquids and surface water management. Includes paragraphs C,F,H,I,L,N,O.	Pertains to new solid waste disposal facilities to be created on site and existing landfills that will be expanded during remediation. Portions also may pertain to existing areas of contamination that will be capped in-place per solid waste rules.	Action
Sanitary Landfill Operations- Leachate and Air Emission	3745-27-09/C	Leachate treatment and/or disposal and air emission requirements must be met prior to accepting solid waste at both newly created facilities and at expanded areas of existing facilities on-site.	Pertains to "new" solid waste disposal facilities to be created on-site and existing landfill that will be expanded during remediation.	Action
Sanitary Landfill Operations - Daily Cover	3745-27-09/F	Includes requirements for daily cover; intermediate cover for temporarily inactive areas and final cover for areas at final elevations.	Pertains to "new" solid waste disposal facilities to be created on site and existing facilities to be expanded during remediation.	Action
Sanitary Landfill Operations - Compatibility Testing	3745-27-09/H	Compatibility testing may be required to demonstrate that material to be disposed will not compromise the integrity of any material used to construct the landfill.		Action

TABLE C-4 (Cont'd)

State of Ohio ARARs

Title or Subject of Regulation	Code Section/ Paragraph	Description of Regulation	Application of Regulation	ARAR Type
Sanitary Landfill Operations - Surface Water	3745-27-09/N	Surface water must be diverted from areas where solid waste is being, or has been, deposited.		Action
Sanitary Landfill Operations - Leachate	3745-27-09/O	Requires repair of leachate outbreaks; collection and treatment of leachate on the surface of the landfill; and actions to minimize, control or eliminate conditions causing leachate outbreaks.		Action
Sanitary Landfill Ground Water Monitoring	3745-27-10/B,C,D	Ground water monitoring program must be established for all sanitary landfill facilities. The system must consist of a sufficient number of wells that are located so that samples indicate both upgradient (background) and downgradient water samples. The system must be designed per the minimum requirements specified in this rule. The sampling and analysis procedures used must comply with this rule.	Pertains to any new solid waste facility and any expansions of existing solid waste landfills on site. Also may pertain to existing areas of contamination that are capped in-place per the solid waste rules.	Action
Final Closure of Sanitary Landfill Facilities	3745-27-11/B,G.	Requires closure of a landfill in a manner which minimizes need for post closure maintenance and minimizes post-closure formation and release of leachate and explosive gases to air, soil ground water or surface water. Specifies acceptable cap design; soil barrier layer, granular drainage layer, soil and vegetative layer. Provides for use of comparable materials to those specified with approval of director.	Substantive requirements pertain to any new solid waste landfills created on site. Any expansions of existing solid waste landfills on site and any existing areas of contamination that are capped in-place per the solid waste rules.	Action

TABLE C-4 (Cont'd)

State of Ohio ARARs

Title or Subject of Regulation	Code Section/ Paragraph	Description of Regulation	Application of Regulation	ARAR Type
Disturbances Where HAZ or Solid Waste Fac. was Operated	3745-27-13/C	Requires that a detailed plan be provided to describe how any proposed filling, grading, excavating, building, drilling or mining on land where a hazardous waste facility or solid waste facility was operated will be accomplished. This information must demonstrate that the proposed activities will not create a nuisance or adversely affect the public health or the environment. Special terms to conduct such activities may be imposed by the director to protect the public and the environment.	Pertains to any site at which hazardous or solid waste has been managed, either intentionally or otherwise. Does not pertain to areas that have had one-time leaks or spills.	Action Location
Post-Closure Care of Sanitary Landfill Facilities	3745-27-14/A	Specifies the required post-closure care for solid waste facilities. Includes continuing operation of leachate and surface water management systems, maintenance of the cap system and ground water monitoring.	Substantive requirements pertain to any newly created solid waste landfill on site. Any expansions of existing solid waste landfills on site and any existing areas of contamination that are capped per the solid waste rules.	Action
Water/Air permit Criteria for Decision by the Director	3745-31-05	A permit to install (PTI) or plans must demonstrate best available technology (BAT) and shall not interfere with or prevent the attainment or maintenance of applicable ambient air quality standards.	Pertains to any site that will discharge to on-site surface water or will emit contaminants into the air.	Action
Water Quality Criteria for Decision by the Director	3745.32.05	Specifies substantive criteria for section 401 water quality criteria for dredging, filling, obstructing or altering waters of the state.	Pertains to any site that has or will affect waters of the state.	Action

TABLE C-4 (Cont'd)

State of Ohio ARARs

Title or Subject of Regulation	Code Section/ Paragraph	Description of Regulation	Application of Regulation	ARAR Type
Prohibition of Unauthorized Injection	3745-34-08	Underground injection is prohibited without authorization from director.	Pertains to sites at which materials are to be injected underground. Consider for technologies such as bioremediation and soil flushing.	Action
No Movement of Fluid into Underground Drinking Water	3745-34-07	The underground injection of fluid containing any contaminant into an underground source of drinking water is prohibited if the presence of that contaminant may cause a violation of the primary drinking water standards or otherwise adversely affect the health of persons.	Pertains to sites at which materials are to be injected underground. Consider for technologies such as bioremediation and soil flushing.	
Elimination of Class IV Wells	3745-34-08	The injection of hazardous or radioactive waste directly into an underground source of drinking water is prohibited.	Pertains to sites at which materials are to be injected underground. Consider for technologies such as bioremediation and soil flushing.	
Requirements for Wells Injecting Hazardous Waste	3745-34-09	Specifies requirements for the injection of hazardous wastes underground. See 3745-34-06 for limitations.	Pertains to sites at which materials are to be injected underground. Consider for technologies such as bioremediation and soil flushing.	
Waiver of Requirement by Director	3745-34-10	The director may authorize less stringent requirements for an injection that does not occur into, through or above an underground source of drinking water.	Pertains to sites at which materials are to be injected underground. Consider for technologies such as bioremediation and soil flushing.	
Class V Wells	3745-34-13	Specifies requirements for Class V wells. See 3745-34-04 for definitions.	Pertains to sites at which materials are to be injected underground. Consider for technologies such as bioremediation and soil flushing.	

TABLE C-4 (Cont'd)

State of Ohio ARARs

Title or Subject of Regulation	Code Section/ Paragraph	Description of Regulation	Application of Regulation	ARAR Type
Conditions Applicable to All Permits	3745-34-26	Specifies minimum conditions to be applied to all underground injections.	Pertains to sites at which materials are to be injected underground. Consider for technologies such as bioremediation and soil flushing.	
Mechanical Integrity	3745-34-34	Specifies requirements to be met to ensure mechanical integrity of wells.	Pertains to sites at which materials are to be injected underground. Consider for technologies such as bioremediation and soil flushing.	
Plugging and Abandoning Class I Wells	3745-34-36	Specifies requirements to be met when plugging or abandoning a Class I well. See 3745-34-04 for definitions.	Pertains to sites at which materials are to be injected underground. Consider for technologies such as bioremediation and soil flushing.	
Construction Requirements for Class I Wells	3745-34-37	Specifies construction and siting requirements for Class I wells.	Pertains to sites at which materials are to be injected underground. Consider for technologies such as bioremediation and soil flushing.	Action Location
Operating, Monitoring and Reporting Req. for Class I Wells	3745-34-38	Specifies operating, monitoring and reporting requirements necessary for Class I wells.	Pertains to sites at which materials are to be injected underground. Consider for technologies such as bioremediation and soil flushing.	
Stds. and Criteria for Variances from Class as a Waste	3745-50-312/A,B,C	Presents criteria by which director may grant requests for variance from classifying certain materials as a waste.	Pertains to any site that has wastes that may be recycled or reclaimed.	Action Chemical
Hazardous Waste Facility Permit Conditions	3745-50-58/E,I,J	Establishes general permit conditions applied to all hazardous waste facilities in Ohio. Includes conditions such as operation and maintenance, site access, monitoring, etc.	Pertains to all alternatives that will incorporate treatment, storage or disposal of hazardous waste.	Action

TABLE C-4 (Cont'd)

State of Ohio ARARs

Title or Subject of Regulation	Code Section/ Paragraph	Description of Regulation	Application of Regulation	ARAR Type
Trial Burn for Incinerators	3745-50-62/A,B,C,D	Specifies requirements of a trial burn.	Pertains to any alternative incorporating on-site incineration.	Action
REQ. for Conditionally Exempt Small Quantity Generators	3745-51-05/A-J	Specifies requirements for conditionally exempt small quantity generators of hazardous waste. Provides relief from many of the hazardous waste regulations.	Consider for sites where the quantity of hazardous waste generated by an on-site action will be less than 100 KG per month. Monthly limit for acute hazardous waste is one (1) KG.	Action Chemical
Residues of HAZ Wastes in Empty Containers	3745-51-07/A-B	Exempts the residues of hazardous wastes from empty containers from the hazardous waste regulations. Provides specific definitions for these residues.	Pertains to any alternative that incorporates storage of hazardous waste on site in containers.	Action
Evaluation of Wastes	3745-52-11/A-D	Any person generating a waste must determine if that waste is a hazardous waste (either through listing or by characteristic).	Pertains to sites at which wastes of any type (both solid and hazardous) are located.	Chemical Action
Hazardous Waste Manifest - General Requirements	3745-52-20	Requires a generator who transports or offers for transportation hazardous waste for off-site treatment, storage or disposal to prepare a uniform hazardous waste manifest.	Pertains to sites where hazardous waste will be transported off site for treatment, storage or disposal.	Chemical Action
Hazardous Waste Manifest - Number of Copies	3745-52-22	Specifies the number of manifest copies to be prepared.	Pertains to sites where hazardous waste will be transported off site for treatment, storage or disposal.	Chemical Action
Hazardous Waste Manifest - Use	3745-52-23	Specifies procedures for the use of hazardous waste manifests including a requirement that they be hand signed by the generator	Pertains to sites where hazardous waste will be transported off site for treatment, storage or disposal.	Chemical Action

TABLE C-4 (Cont'd)

State of Ohio ARARs

Title or Subject of Regulation	Code Section/ Paragraph	Description of Regulation	Application of Regulation	ARAR Type
Hazardous Waste Packaging	3745-52-30	Requires a generator to package hazardous waste in accordance with U.S. DOT regulations for transportation off site.	Pertains to any site where hazardous waste will be generated by on-site activities and shipped off site for treatment and/or disposal.	Chemical Action
Hazardous Waste Labeling	3745-52-31	Requires packages of hazardous waste to be labelled in accordance with U.S. DOT regulations for off-site transportation.	Pertains to any site where hazardous waste will be generated by on-site activities and shipped off site for treatment and/or disposal.	Chemical Action
Hazardous Waste Marking	3745/52/32	Specifies language for marking packages of hazardous waste prior to off-site transportation.	Pertains to any site where hazardous waste will be generated by on-site activities and shipped off site for treatment and/or disposal.	Chemical Action
Hazardous Waste Placarding	3745-52-33	Generator shall placard hazardous waste prior to off site transportation.	Pertains to any site where hazardous waste will be generated by on-site activities and shipped off site for treatment and/or disposal.	Chemical Action
Accumulation Time of Hazardous Waste	3745-52-34	Identifies maximum time periods that a generator may accumulate a hazardous waste without being considered an operator of a storage facility. Also establishes standards for management of hazardous wastes by generators.	Pertains to a site where hazardous waste will be generated as a result of the remedial activities.	Chemical Action
General Analysis of Hazardous Waste	3745-54-13/A	Prior to any treatment, storage or disposal of hazardous wastes, a representative sample of the waste must be chemically and physically analyzed.	Pertains to any site at which hazardous waste is to be treated, stored or disposed of (or has been disposed of).	Chemical

TABLE C-4 (Cont'd)

State of Ohio ARARs

Title or Subject of Regulation	Code Section/ Paragraph	Description of Regulation	Application of Regulation	ARAR Type
Security for Hazardous Waste Facilities	3745-54-14/A,B,C	Hazardous waste facilities must be secured so that unauthorized and unknowing entry are minimized or prohibited.	Pertains to any site at which hazardous waste is to be treated, stored or disposed of (or has been disposed of)	Action
Inspection Requirements for Hazardous Waste	3745-54-15/A,C	Hazardous waste facilities must be inspected regularly to detect malfunctions, deteriorations, etc. Malfunctions or deteriorations detected shall be remedied expeditiously.	Pertains to any site at which hazardous is to be treated, stored or disposed of (or has been disposed of).	Action
Location Standards for Hazardous Waste T/S/D Facilities	3745-54-18/A,B,C	Restricts the siting of hazardous waste facilities in areas of seismic activity or floodplains.	Pertains to any site at which hazardous waste is to be treated, stored or disposed of (or has been disposed of).	Location
Design & Operation of Hazardous Waste Facilities	3745-54-31	Hazardous waste facilities must be designed, constructed, maintained and operated to minimize the possibility of fire, explosion or unplanned release of hazardous waste or hazardous constituents to the air, soil, or surface water which could threaten human health or the environment.	Pertains to any site at which hazardous waste is to be treated, stored or disposed of (or has been disposed of)	Action
Required Equipment for Hazardous Waste Facilities	3745-54-32/A,B,C,D,	All hazardous waste facilities must be equipped with emergency equipment, such as an alarm system, fire control equipment and a telephone or radio.	Pertains to any site at which hazardous waste is to be treated, stored or disposed of (or has been disposed of)	Action
Testing and Maintenance of Equipment; HAZ Waste Facilities	3745-54-33	All hazardous waste facilities must test and maintain emergency equipment to assure proper operation.	Pertains to any site at which hazardous waste is to be treated, stored or disposed of (or has been disposed of)	Action

TABLE C-4 (Cont'd)

State of Ohio ARARs

Title or Subject of Regulation	Code Section/ Paragraph	Description of Regulation	Application of Regulation	ARAR Type
Access to Communications or Alarm System; HAZ Waste Facilities	3745-54-34	Whenever hazardous waste is being handled, all personnel involved shall have immediate access to an internal alarm or emergency communication device.	Pertains to any site at which hazardous waste is to be treated, stored or disposed of (or has been disposed of).	Action
Arrangements/Agreements with Local Authorities	3745-54-37/A,B	Arrangements or agreements with local authorities, such as police, fire department and emergency response team must be made. If local authorities will not cooperate, documentation of that non-cooperation should be provided.	Pertains to any site at which hazardous waste is to be treated, stored or disposed of (or has been disposed of).	Action
Emergency Coordinator; Hazardous Waste Facilities	3745-54-55	At all times there should be at least one employee either on the premises or on call to coordinate all emergency response measures.	Pertains to any site at which hazardous waste is to be treated, stored or disposed of (or has been disposed of).	Action
Emergency Procedures, Hazardous Waste Facilities	3745-54-56/A-1	Specifies the procedures to be followed in the event of an emergency.	Pertains to any site at which hazardous waste is to be treated, stored or disposed of (or has been disposed of).	Action
Ground Water Protection, Applicability	3745-54-90	Establishes circumstances under which an operator of a hazardous waste facility must implement a ground water protection program or a corrective action program.	Pertains to all sites with land-based hazardous waste units (surface impoundments, waste piles, land treatment units, landfills). This includes existing land-based areas of contamination.	Location Action
Req. Ground Water Programs for HAZ Waste Facilities	3745-54-91/A	Presents the ground water monitoring and response programs required for hazardous waste land-based units.	Pertains to all sites with land-based hazardous waste units (surface impoundments, waste piles, land treatment units, landfills). This includes existing land-based areas of contamination.	Action

TABLE C-4 (Cont'd)

State of Ohio ARARs

Title or Subject of Regulation	Code Section/ Paragraph	Description of Regulation	Application of Regulation	ARAR Type
Ground Water Protection Standard, HAZ Waste Facilities	3745-54-92	Compliance must be attained with the conditions specified in the permit to ensure that hazardous constituents (see 3745-54-93) do not exceed the promulgated limits (see 3745-54-94)	Pertains to all sites with land-based hazardous waste units (surface impoundments, waste piles, land treatment units, landfills). This includes existing land-based areas of contamination.	Action Chemical
Hazardous Constituents in Ground Water, HAZ (Waste) Facilities	3745-54-93/A,B,	Requires that permit specify hazardous constituents to which the ground water protection standard of hazardous waste or constituents identified in the Appendix of this rule that have been detected in ground water in the uppermost aquifer underlying the unit(s) and are reasonably expected to be in or derived from waste contained in the unit(s).	Pertains to all sites with land-based hazardous waste units (surface impoundments, waste piles, land treatment units, (and fills). This includes existing land-based areas of contamination.	Chemical
Concentration Limits for Ground Water, HAZ Waste Facilities	3745-54-94/A,B,	Presents the methodology for determining concentration limits and alternative concentration limits.	Pertains to all sites with land-based hazardous waste units (surface impoundments, waste piles, land treatment units, landfills). This includes existing land-based areas of contamination.	Chemical
Point of Compliance for Ground Water, HAZ Waste Facilities	3745-54-95/A,B,	Establishes point of compliance at vertical surface located at the hydraulically downgradient limit of the waste management area that extends down into the uppermost aquifer underlying the unit(s).	Pertains to all sites with land-based hazardous waste units (surface impoundments, waste piles, land treatment units, landfills). This includes existing land-based areas of contamination.	Action Chemical

TABLE C-4 (Cont'd)

State of Ohio ARARs

Title or Subject of Regulation	Code Section/ Paragraph	Description of Regulation	Application of Regulation	ARAR Type
Compliance Period for Ground Water; HAZ Waste Facilities	3745-54-96/A,B,C,	A compliance period during which the ground water protection standards apply will be specified in the permit. Rule requires that the compliance period for a facility undergoing a corrective action program will extend until it can be demonstrated that the ground water protection standard of OAC 3745-54-92 has not been exceeded for a period of three consecutive years.	Pertains to all sites with land-based hazardous waste units (surface impoundments, waste piles, land treatment units, landfills). This includes existing land-based areas of contamination.	Action Chemical
Gen Ground Water Monitoring Requirements, HAZ Waste Facilities	3745-54-97/A-H	Presents general ground water monitoring program requirements. Includes number, location and depth of wells, casing requirements, sampling and analysis procedures, etc.	Pertains to all sites with land-based hazardous waste units (surface impoundments, waste piles, land treatment units, landfills). This includes existing land-based areas of contamination.	Action Chemical
Ground Water Detection Monitoring Prog, HAZ Waste Facilities	3745-54-98/A-I	Presents requirements of ground water detection program.	Pertains to all sites with land-based hazardous waste units (surface impoundments, waste piles, land treatment units, landfills) at which hazardous constituents have not been detected in the ground water. This includes existing land-based areas of contamination.	Action Chemical
Ground Water Compliance Monitoring Prog; HAZ Waste Facilities	3745-54-99/A-J	Presents requirements of ground water compliance monitoring program.	Pertains to all sites with land-based hazardous waste units (surface impoundments, waste piles, land treatment units, landfills) at which hazardous constituents have been detected. This includes existing land-based areas of contamination.	Action Chemical

TABLE C-4 (Cont'd)

State of Ohio ARARs

Title or Subject of Regulation	Code Section/ Paragraph	Description of Regulation	Application of Regulation	ARAR Type
Ground Water Corrective Action Program, HAZ Waste Facilities	3745-55-01/A-F	Presents the requirements of a ground water corrective action program that prevents hazardous constituents from exceeding their respective concentration limits at the compliance point by either removal or treatment of these hazardous constituents.	Pertains to all sites with land-based hazardous waste units (surface impoundments, waste piles, land treatment units, landfills) at which hazardous constituents have been detected. This includes existing land-based areas of contamination.	Action Chemical
Corrective Action for Waste Management Units	3745-55-011/A,C,	Requires an applicant for a hazardous waste permit to institute corrective action for all releases of hazardous waste or constituents from any waste management unit, regardless of the time at which waste was placed in such unit.	Pertains to all sites with land-based hazardous waste units (surface impoundments, waste piles, land treatment units, landfills) at which hazardous constituents have been detected. This includes existing land-based areas of contamination.	Action
General Closure Performance Standard, HAZ Waste Facilities	3745-55-11/A,B,C,	Requires that all hazardous waste facilities be closed in a manner that minimizes the need for further maintenance, controls, minimizes, eliminates or prevents post-closure escape of hazardous waste. Hazardous constituents, leachate, contaminated run-off or hazardous waste decomposition products to the ground or surface water or the atmosphere.	Pertains to any site at which hazardous waste is to be treated, stored or disposed of (or has been treated, stored or disposed of).	Action
Disposal/Decon of Equipment, Structures and Soils	3745-55-14	Requires that all contaminated equipment, structures and soils be properly disposed of or decontaminated. Removal of hazardous wastes or constituents from a unit may constitute generation of hazardous wastes.	Pertains to any site at which hazardous waste is to be treated, stored or disposed of (or has been treated, stored or disposed of).	Action

TABLE C-4 (Cont'd)

State of Ohio ARARs

Title or Subject of Regulation	Code Section/ Paragraph	Description of Regulation	Application of Regulation	ARAR Type
Post-Closure Care and Use of Property	3745-55-17/B	Specifies the post-closure care requirements, including maintenance monitoring and post-closure use of property.	Pertains to all sites with land-based hazardous waste units (landfills and surface impoundments, waste piles, land treatment units and tanks that meet requirements of landfills after closure). This includes existing land-based areas of contamination.	Action
Notice to Local Land Authority	3745-55-19/B	Requires that a record of the type, location and quantity of hazardous wastes disposed of in each unit be submitted to the local land authority and the director of the Ohio EPA. Also requires that a notation to the deed to the facility property be made indicating that the land was used to manage hazardous wastes and that certain use restrictions may apply to the property.	Pertains to all sites with land-based hazardous waste units (landfills and surface impoundments, waste piles, land treatment units and tanks that meet requirements of landfills after closure). This includes existing land-based areas of contamination.	Action
Design and Operating Requirements for Waste Piles	3745-56-51/A-F	Specifies the design and operation requirements for waste piles. Includes liner system, leachate collection and removal system, wind dispersal prevention and run-on/run-off control.	Pertains to any site at which hazardous waste will be either stored or treated in waste piles.	Action
Monitoring and Inspection	3745-56-51/L-P	Waste piles must be monitored during construction.	Pertains to any site at which hazardous waste will be either stored or treated in waste piles.	Action
Land Treatment Unsaturated Zone Monitoring	3745-56-78/A-F	An unsaturated zone monitoring program must be established for all land treatment units. The requirements of this program are presented by this rule.	Pertains to any site at which hazardous waste will be treated or disposed of in land treatment units.	Action Chemical

TABLE C-4 (Cont'd)

State of Ohio ARARs

Title or Subject of Regulation	Code Section/ Paragraph	Description of Regulation	Application of Regulation	ARAR Type
Land Treatment Closure and Post-Closure Care	3745-56-80/A-E	Establishes closure and post-closure requirements for land treatment units.	Pertains to any site at which hazardous waste will be treated or disposed of in land treatment units.	Action
Land Treatment Requirements; Ignitable/Reactive Wastes	3745-56-81/A-B	Prohibits the application of ignitable or reactive waste to the treatment zone, except under certain circumstances.	Pertains to any site at which potentially ignitable or reactive hazardous wastes will be treated or disposed of in land treatment units.	Action Chemical
Land Treatment Requirements for Incompatible Wastes	3745-58-82	Prohibits the placement of incompatible waste in or on the treatment zone.	Pertains to any site at which potentially incompatible hazardous wastes will be treated or disposed of in land treatment units.	Action Chemical
Environmental Performance Standards; Land-Based Units	3745-57-01/A-D	Specifies location, design, construction, operation, maintenance and closure requirements for landfills, waste piles, surface impoundments and underground injection wells.	Pertains to all sites that either have or will have at least one of the following units on site: landfills, waste piles, surface impoundments, land treatment facilities and underground injection wells (this includes existing land-based areas of contamination).	Action
Landfill Design and Operating Requirements	3745-57-03/A-I	Presents design and operating requirements for landfills. Includes liner, leachate collection and removal, run-on/run-off control, etc.	Pertains to all sites at which hazardous waste landfill will either be located or an existing landfill will be expanded. This rule also pertains to existing land-based areas of contamination.	Action
Monitoring and Inspections of Landfills	3745-57-05/A,B	Requires inspection of landfills during construction or installation and operation.	Pertains to all sites at which a hazardous waste landfill will either be located or an existing landfill will be expanded. This rule pertains to existing land-based areas of contamination.	Action

TABLE C-4 (Cont'd)

State of Ohio ARARs

Title or Subject of Regulation	Code Section/ Paragraph	Description of Regulation	Application of Regulation	ARAR Type
Landfill Closure and Post-Closure Care	3745-57-10/A,B,	Specifies closure and post-closure requirements for hazardous waste landfills. Includes final cover and maintenance.	Pertains to all sites at which hazardous waste landfill will either be located or an existing landfill will be expanded. This rule pertains to existing land-based areas of contamination.	Action
Landfill Requirements for Bulk and Containerized Liquids	3745-57-14/A-D	The placement of bulk or non-containerized liquid hazardous waste or hazardous wastes containing free liquids (whether or not absorbants have been added) in any landfill is prohibited.	Pertains to all sites at which a liquid hazardous waste or hazardous waste containing free liquids are considered for landfilling.	Action
Principal Organic Hazardous Constituents; Incinerators	3745-57-42/A,B,C,	Establishes method by which POHCS will be specified.	Pertains to any alternative that will incorporate incineration of hazardous wastes.	Chemical Action
Performance Standards for Incinerators	3745-57-43/A,B,C,	Specifies performance standards that all incinerators must meet (destruction removal efficiencies, HCL emissions, particulate emissions)	Pertains to any alternative that will incorporate incineration of hazardous wastes.	Chemical Action
Incinerator Trial Burns - Alternative Data	3745-57-44/C	Requires trial burn to determine final operating conditions.	Pertains to any alternative that will incorporate incineration of hazardous wastes.	Action Chemical
Incinerator Operating Requirements	3745-57-45/A-F	Specifies general operating requirements for all incinerators.	Pertains to any alternative that will incorporate incineration of hazardous wastes.	Action
Monitoring and Inspection of Incinerators	3745-57-47/A,B,C	Requires the monitoring of certain parameters on a continuous basis and inspections of equipment.	Pertains to any alternative that will incorporate incineration of hazardous wastes.	Action Chemical
Closure of Incinerators	3745-57-51	Requires that all hazardous waste and hazardous waste residues be removed from the incinerator site.	Pertains to any alternative that will incorporate incineration of hazardous wastes.	Action

TABLE C-4 (Cont'd)

State of Ohio ARARs

Title or Subject of Regulation	Code Section/ Paragraph	Description of Regulation	Application of Regulation	ARAR Type
Hazard Wastes Restricted From Land Disposal - Exceptions	3745-59-01/C,E	Lists type of restricted wastes that may be land disposed. Lists type of hazardous wastes not subject to LDRs.	Pertains to any alternative that incorporates disposal of hazardous waste on site.	Action
Dilution Prohibited as a Substitute for Treatment	3745-59-03/A,B	Prohibits dilution of a restricted waste or the residual from treatment of a restricted waste as a substitute for adequate treatment in order to land dispose hazardous waste. Dilution of water wastes is not impermissible dilution unless a method has been specified as a treatment standard.	Pertains to any alternative that incorporates disposal of hazardous waste on site.	Action
Waste Analysis of Hazardous Waste	3745-59-07/A,B,C	Generator shall test the waste or test and extract of the waste according to the frequency and test methods described in the rules, to determine if the waste is restricted from land disposal.	Pertains to an alternative that incorporates disposal of hazardous waste on site.	Action
Spec Rules Regarding Waste that Exhibits a Characteristic	3745-59-09/B,C	Prohibits land disposal of characteristic waste unless the waste complies with the treatment standards of listed wastes. If the waste is both listed and exhibits a characteristic, the treatment standard for the listed waste will operate in lieu of the standard for the characteristic waste.	Pertains to any site in which on-site disposal of hazardous waste is an alternative.	Action Chemical
Waste Specific Prohibitions	3745-59-30/A,B,C,	Prohibits spent solvent wastes or contaminated soil and debris resulting from a response action under CERCLA or RCRA to be land disposed unless generator meets treatment standards (3745-59-40 to 44) or has been granted an extension or exception.	Pertains to any site in which on-site land disposal of hazardous waste is an alternative.	Action Chemical

TABLE C-4 (Cont'd)

State of Ohio ARARs

Title or Subject of Regulation	Code Section/ Paragraph	Description of Regulation	Application of Regulation	ARAR Type
Maximum Contaminant Levels for Inorganic Chemicals	3745-81-11/A,B	Presents maximum contaminant levels for inorganics.	Pertains to any site which has contaminated ground or surface water that is either being used, or has the potential for use, as a drinking water source.	Chemical
Maximum Contaminant Levels for Organic Chemicals	3745-81-12/A,B,C,	Presents MCLS for organics.	Pertains to any site which has contaminated ground or surface water that is either being used, or has the potential for use, as a drinking water source.	Chemical
Maximum Contaminant Levels for Turbidity	3745-81-13/A,B	Presents MCLS for Turbidity.	Pertains to any site which has contaminated ground or surface water that is either being used, or has the potential for use, as a drinking water source.	Chemical
Inorganic Contaminant Monitoring Requirements	3745-81-23/A-E	Presents monitoring requirements for inorganic contaminants.	Pertains to any site which has contaminated ground or surface water that is either being used, or has the potential for use, as a drinking water source.	Chemical
Organic Contaminant Monitoring Requirements	3475-81-24/A-E	Presents monitoring requirements for organic contaminants.	Pertains to any site which has contaminated ground or surface water that is either being used, or has the potential for use, as a drinking water source.	Chemical
Analytical Techniques	3745-81-27/A-E	Presents general analytical techniques for MCLS.	Pertains to any site which has contaminated ground or surface water that is either being used, or has the potential for use, as a drinking water source.	Chemical

TABLE C-4 (Cont'd)

State of Ohio ARARs

Title or Subject of Regulation	Code Section/ Paragraph	Description of Regulation	Application of Regulation	ARAR Type
Requirements for a Variance from MCLS	3745-81-40/A,B,C	Provides criteria by which director may grant variance from MCLS.	Pertains to any site which has contaminated ground or surface water that is either being used, or has the potential for use, as a drinking water source.	Chemical
Alternative Treatment Technique Variance	3745-81-46	Allows for the use of alternative treatment techniques to attain MCLS.	Pertains to any site which has contaminated ground or surface water that is either being used, or has the potential for use, as a drinking water source.	Chemical
Location/Siting of New GW Wells	3745-9-04/A,B	Mandates that ground water wells be: A) located and maintained so as to prevent contaminants from entering well. B) Located so as to be accessible for cleaning and maintenance.	Pertains to all ground water wells on the site that either will be installed or have been installed since Feb. 15, 1975. Would pertain during the FS if new wells are constructed for treatability studies.	Location Action
Construction of New GW Wells	3745-9-05/A1,6H	Specifies minimum construction requirements for new ground water wells in regards to casing material, casing depth, potable water, annular spaces, use of drive shoe, openings to allow water entry, contaminant entry.	Pertains to all ground water wells on the site that either will be installed or have been installed since Feb. 15, 1975. Would pertain during the FS if new wells are constructed for treatability studies.	Action
Casing Requirements for New GW Wells	3745-9-06/A,B,D,E	Establishes specific requirements for well casings, such as suitable material, diameters and condition.	Pertains to all ground water wells on the site that either will be installed or have been installed since Feb. 15, 1975. Would pertain during the FS if new wells are constructed for treatability studies.	Action

TABLE C-4 (Cont'd)

State of Ohio ARARs

Title or Subject of Regulation	Code Section/ Paragraph	Description of Regulation	Application of Regulation	ARAR Type
Surface Design of New GW Wells	3745-9-07/A-F	Establishes specific surface design requirements, such as height aboveground well vents, well pumps, etc.	Pertains to all ground water wells on the site that either will be installed or have been installed since Feb. 15, 1975. Would pertain during the FS if new wells are constructed for treatability studies.	Action
Start-up and Operation of GW Wells	3745-9-08/A,C,	Require disinfection of new wells and use of potable water for priming pumps.	Pertains to all ground water wells on the site that either will be installed or have been installed since Feb. 15, 1975. Would pertain during the FS if new wells are constructed for treatability studies.	Action
Maintenance and Operation of GW Wells	3745-9-09/A-C,D1,E-G	Establishes specific maintenance and modification requirements for casing, pump and wells in general.	Pertains to all ground water wells on the site that either will be installed or have been installed since Feb. 15, 1975. Would pertain during the FS if new wells are constructed for treatability studies.	Action
Abandonment of Test Holes and GW Wells	3745-9-10/A,B,C	Following completion of use, wells and test holes shall be completely filled with grout or similar material or shall be maintained in compliance of all regulations.	Pertains to all ground water wells on the site that either will be installed or have been installed since Feb. 15, 1975.	Action
Use of Wells for Disposal	3745-9-11	No person shall use any well to inject or reinject any substance into the ground without necessary permits.	May pertain to systems that entail injection or reinjection of fluid into the ground. Consider for in-situ bioremediation, soil flushing and ground water plume containment.	Action

ADMINIS. CODE SECTION	PERTINENT PARAGRAPH	TITLE OR SUBJECT OF REGULATION	DESCRIPTION OF REGULATION	APPLICATION OF REGULATION	ARAR TYPE
1501 18 1	03. A	LIST OF ENDANGERED PLANT SPECIES	PLANT SPECIES CONSIDERED ENDANGERED IN OHIO	May apply at remediation sites where chemical release threatens listed species. Should also be considered where remediation activities may disrupt habitats	
1501 14 3	2 11	SOIL AND DRAINAGE	REQUIREMENTS FOR RECLAMATION OF SURFACE MINED AREAS ISOLATION OF ACID DRAINAGE. RESTRICTION ON SURFACE WATER IMPOUNDMENTS. RULES FOR USE OF EXPLOSIVES. PROTECTION OF UNDERGROUND WATER SUPPLIES. SAFETY OF HIGHWALLS. RESOLING. REVEGETATION. DAMS AND DIVERSIONS.	CONSIDER FOR SITES WITH SOIL BORROW AREAS OR EXTENSIVE EXCAVATION.	
1501 14 4	1 3	GEOLOGICAL SURVEYS	REQUIRES SURVEY AND OTHER INFORMATION FOR SURFACE MINING	CONSIDER FOR SITE WITH BORROW SOURCE AREA OR EXTENSIVE EXCAVATION.	
1501 31 23	01. A B	LIST OF ENDANGERED ANIMAL SPECIES	List of Ohio animal species considered endangered	May apply to remediation sites where listed species are threatened by chemical releases. May also apply at sites where remediation could disturb existing habitats	
3745 1 03		ANALYTICAL AND COLLECTION PROCEDURES	SPECIFIES ANALYTICAL METHODS AND COLLECTION PROCEDURES FOR SURFACE WATER DISCHARGES.	PERTAINS TO BOTH DISCHARGES TO SURFACE WATERS AS A RESULT OF REMEDIATION AND ANY ON-SITE SURFACE WATERS AFFECTED BY SITE CONDITIONS.	ACTION
3745 1 04	A.,B,C,D,E	THE "FIVE FREEDOMS" FOR SURFACE WATER	ALL SURFACE WATERS OF THE STATE SHALL BE FREE FROM: A) OBJECTIONAL SUSPENDED SOLIDS. B) FLOATING DEBRIS, OIL AND SCUM. C) MATERIALS THAT CREATE A NUISANCE D) TOXIC, HARMFUL OR LETHAL SUBSTANCES E) NUTRIENTS THAT CREATE NUISANCE GROWTH	PERTAINS TO BOTH DISCHARGES TO SURFACE WATERS AS A RESULT OF REMEDIATION AND ANY ON-SITE SURFACE WATERS AFFECTED BY SITE CONDITIONS.	CHEMICAL
3745 1 05	A,B,C	ANTIDegradation POLICY FOR SURFACE WATER	PREVENTS DEGRADATION OF SURFACE WATER QUALITY BELOW DESIGNATED USE OR EXISTING WATER QUALITY. EXISTING INSTREAM USES SHALL BE MAINTAINED AND PROTECTED. THE MOST STRINGENT CONTROLS FOR TREATMENT SHALL BE REQUIRED BY THE DIRECTOR TO BE EMPLOYED FOR ALL NEW AND EXISTING POINT SOURCE DISCHARGES. PREVENTS ANY DEGRADATION OF "STATE RESOURCE WATERS".	REQUIRES THAT BEST AVAILABLE TECHNOLOGY (BAT) BE USED TO TREAT SURFACE WATER DISCHARGES. DWQPA USES THIS RULE TO SET STANDARDS WHEN EXISTING WATER QUALITY IS BETTER THAN THE DESIGNATED USE.	CHEMICAL
3745 1 06	A,B	MIXING ZONES FOR SURFACE WATER	(A) PRESENTS THE CRITERIA FOR ESTABLISHING NON-THERMAL MIXING ZONES FOR POINT SOURCE DISCHARGES (B) PRESENTS THE CRITERIA FOR ESTABLISHING THERMAL MIXING ZONES FOR POINT SOURCE DISCHARGES	APPLIED AS A TERM OF DISCHARGE PERMIT TO INSTALL (PTI). WOULD PERTAIN TO AN ALTERNATIVE WHICH RESULTED IN A POINT SOURCE DISCHARGE	CHEMICAL
3745 1 07	C	WATER QUALITY CRITERIA	ESTABLISHES WATER QUALITY CRITERIA FOR POLLUTANTS WHICH DO NOT HAVE SPECIFIC NUMERICAL OR NARRATIVE CRITERIA IDENTIFIED IN TABLES 7-1 THROUGH 7-15 OF THIS RULE.	PERTAINS TO BOTH DISCHARGES TO SURFACE WATERS AS A RESULT OF REMEDIAL ACTION AND ANY SURFACE WATERS AFFECTED BY SITE CONDITIONS.	CHEMICAL ACTION
3745 1 24		WATER USE DES FOR MUSKINGUM RIVER	ESTABLISHES WATER USE DESIGNATIONS FOR STREAM SEGMENTS WITHIN THE MUSKINGUM RIVER BASIN	PERTINENT IF STREAM OR STREAM SEGMENT IS ON SITE AND IS EITHER AFFECTED BY SITE CONDITIONS OR IF REMEDY INCLUDES DIRECT DISCHARGE. USED BY DWQPA TO ESTABLISH WASTE LOAD ALLOCATIONS	ACTION LOCATION

ADMINIS. CODE SECTION	PERTINENT PARAGRAPH	TITLE OR SUBJECT OF REGULATION	DESCRIPTION OF REGULATION	APPLICATION OF REGULATION	ARAR TYPE
3745 15 06	A1.A2	MALFUNCTION & MAINTENANCE OF AIR POLL CONTROL EQUIPMENT	ESTABLISHES SCHEDULED MAINTENANCE AND SPECIFIES WHEN POLLUTION SOURCE MUST BE SHUT DOWN DURING MAINTENANCE	PERTAINS TO ANY SITE WHICH UTILIZES OR WILL UTILIZE AIR POLLUTION CONTROL EQUIPMENT ON-SITE.	ACTION
3745 15 07	A	AIR POLLUTION NUISANCES PROHIBITED	DEFINES AIR POLLUTION NUISANCE AS AS THE EMISSION OR ESCAPE INTO THE AIR FROM ANY SOURCE(S) OF SMOKE, ASHES, DUST, DIRT, GRIME, ACIDS, FUMES, GASES, VAPORS, ODORS AND COMBINATIONS OF THE ABOVE THAT ENDANGER HEALTH, SAFETY OR WELFARE OF THE PUBLIC OR CAUSE PERSONAL INJURY OR PROPERTY DAMAGE. SUCH NUISANCES ARE PROHIBITED.	PERTAINS TO ANY SITE WHICH CAUSES, OR MAY REASONABLY CAUSE, AIR POLLUTION NUISANCES. CONSIDER FOR SITES THAT WILL UNDERGO EXCAVATION, DEMOLITION, CAP INSTALLATION, METHANE PRODUCTION, CLEARING AND GRUBBING, WATER TREATMENT, INCINERATION AND WASTE FUEL RECOVERY	ACTION
3745 16 02	B.C	STACK HEIGHT REQUIREMENTS	ESTABLISHES ALLOWABLE STACK HEIGHT FOR AIR CONTAMINANT SOURCES BASED ON GOOD ENGINEERING PRACTICE	PERTAINS TO ANY SITE THAT HAS OR WILL HAVE AN AIR CONTAMINANT SOURCE ON-SITE (PARTICULATE, DUST, FUMES, GAS, MIST, SMOKE, VAPOR, ODORS) EMITTED FROM A STACK. CONSIDER FOR REMEDIES INCORPORATING INCINERATION, WASTE FUEL RECOVERY AND WASTEWATER TREATMENT.	ACTION
3745 17 02	A.B.C	PARTICULATE AMBIENT AIR QUALITY STANDARDS	ESTABLISHES SPECIFIC STANDARDS FOR TOTAL SUSPENDED PARTICULATES.	PERTAINS TO ANY SITE THAT MAY EMIT MEASURABLE QUANTITIES OF PARTICULATE MATTER (BOTH STACK AND FUGITIVE). CONSIDER FOR SITES THAT WILL UNDERGO EXCAVATION, DEMOLITION, CAP INSTALLATION, CLEARING AND GRUBBING, INCINERATION AND WASTE FUEL RECOVERY	CHEMICAL
3745 17 05		PARTICULATE NON-DEGRADATION POLICY	DEGRADATION OF AIR QUALITY IN ANY AREA WHERE AIR QUALITY IS BETTER THAN REQUIRED BY 3745-17-02 IS PROHIBITED	PERTAINS TO SITES IN CERTAIN LOCATIONS THAT MAY EMIT OR ALLOW THE ESCAPE OF PARTICULATES (BOTH STACK AND FUGITIVE). CONSIDER FOR SITES THAT WILL UNDERGO EXCAVATION, DEMOLITION, CAP INSTALLATION, CLEARING AND GRUBBING, INCINERATION	CHEMICAL LOCATION
3745 17 07	A.D	VISIBLE PARTICULATE EMISSION CONTROL	SPECIFIES THE ALLOWABLE OPACITY FOR PARTICULATE EMISSIONS. PROVIDES EXCEPTIONS FOR UNCOMBINED WATER, START-UP/SHUTDOWN OF FUEL BURNING EQUIPMENT, MALFUNCTIONS.	PERTAINS TO ANY EMISSION OF PARTICULATE FROM A STACK. CONSIDER FOR INCINERATION AND FUEL BURNING	CHEMICAL
3745-17-08	A1.A2.B.D	EMISSION RESTRICTIONS FOR FUGITIVE DUST	ALL EMISSIONS OF FUGITIVE DUST SHALL BE CONTROLLED.	PERTAINS TO SITES WHICH MAY HAVE FUGITIVE EMISSIONS (NON-STACK) OF DUST. CONSIDER FOR SITES THAT WILL UNDERGO GRADING, LOADING OPERATIONS, DEMOLITION, CLEARING AND GRUBBING AND CONSTRUCTION.	ACTION
3745-17-09	A.B.C	INCINERATOR PARTIC EMISSION & ODOR RESTRICTIONS	ESTABLISHES PARTICULATE EMISSION LIMITATIONS AND DESIGN-OPERATION REQUIREMENTS TO PREVENT THE EMISSION OF OBJECTIONABLE ODORS.	PERTAINS TO ANY REMEDY INCORPORATING INCINERATION	ACTION
3745 17 10	A.B.C	FUEL BURNING PARTIC EMISSION RESTRICTIONS	ESTABLISHES PARTICULATE EMISSION LIMITATIONS FOR FUEL BURNING EQUIPMENT.	PERTAINS TO ANY REMEDY INCORPORATING FUEL BURNING (WASTE FUEL RECOVERY).	ACTION
3745 18 02	A.B.C.D	SULFUR DIOXIDE AMBIENT AIR QUALITY STANDARDS	ESTABLISHES PRIMARY AND SECONDARY AMBIENT AIR QUALITY STANDARDS FOR SULFUR DIOXIDE	PERTAINS TO ANY SITE THAT EMITS OR WILL EMIT SULFUR DIOXIDE. CONSIDER FOR INCINERATION, FUEL BURNING (WASTE FUEL RECOVERY).	ACTION CHEMICAL

ADMINIS- CODE SECTION	PERTINENT PARAGRAPH	TITLE OR SUBJECT OF REGULATION	DESCRIPTION OF REGULATION	APPLICATION OF REGULATION	ARAR TYPE
3745 18 04	A,B,C,E,F	SULFUR DIOXIDE MEASUREMENT METHODS AND PROCEDURES	SPECIFIES TESTING METHODS AND PROCEDURES FOR SULFUR DIOXIDE EMISSIONS COMPLIANCE TESTING	PERTAINS TO ANY SITE THAT WILL EMIT SULFUR DIOXIDE. CONSIDER FOR SITES THAT WILL UTILIZE INCINERATION OR FUEL RECOVERY (WASTE FUEL RECOVERY)	ACTION CHEMICAL
3745 18 05	A	SULFUR DIOXIDE AMBIENT MONITORING REQUIREMENTS	THE DIRECTOR OF THE OHIO EPA MAY REQUIRE ANY SOURCE OF SULFUR DIOXIDE EMISSIONS TO INSTALL, OPERATE AND MAINTAIN MONITORING DEVICES, MAINTAIN RECORDS AND FILE REPORTS	PERTAINS TO ANY SITE THAT EMITS OR WILL EMIT SULFUR DIOXIDE. CONSIDER FOR INCINERATION, FUEL BURNING (WASTE FUEL RECOVERY)	ACTION CHEMICAL
3745 18 06	A G	SULFUR DIOXIDE EMISSION LIMIT PROVISIONS	ESTABLISHES GENERAL LIMIT PROVISIONS FOR SULFUR DIOXIDE	PERTAINS TO ANY SITE THAT WILL EMIT SULFUR DIOXIDE CONSIDER FOR SITES THAT WILL UNDERGO INCINERATION OR FUEL BURNING (WASTE FUEL RECOVERY).	ACTION CHEMICAL
3745 19 03	A,B,C,D	OPEN BURNING STANDARDS IN RESTRICTED AREAS	OPEN BURNING WITHOUT PRIOR AUTHORIZATION FROM OHIO EPA IS PROHIBITED.	PERTAINS TO SITES WITHIN A RESTRICTED AREA (WITHIN THE BOUNDARY OF A MUNICIPALITY AND A ZONE EXTENDING BEYOND SUCH MUNICIPALITY).	LOCATION ACTION
3745 19 04	A,B,C,D	OPEN BURNING STANDARDS IN UNRESTRICTED AREAS	OPEN BURNING WITHOUT PRIOR AUTHORIZATION FROM OHIO EPA IS PROHIBITED.	PERTAINS TO SITES WITHIN AN UNRESTRICTED AREA (OUTSIDE THE BOUNDARY OF A MUNICIPALITY AND A ZONE EXTENDING BEYOND SUCH MUNICIPALITY).	LOCATION ACTION
3745 21 02	A,B,C	AMBIENT AIR QUALITY STANDARDS AND GUIDELINES	ESTABLISHES SPECIFIC AIR QUALITY STANDARDS FOR CARBON MONOXIDE, OZONE AND NON METHANE HYDROCARBONS	PERTAINS TO ANY SITE WHICH WILL EMIT CARBON OXIDES, OZONE OR NON-METHANE HYDROCARBONS. CONSIDER FOR SITES THAT WILL UNDERGO WATER TREATMENT, INCINERATION AND FUEL BURNING (WASTE FUEL RECOVERY)	CHEMICAL ACTION
3745 21 03	B,C,D	METHODS OF AMBIENT AIR QUALITY MEASUREMENT	SPECIFIES MEASUREMENT METHODS TO DETERMINE AMBIENT AIR QUALITY FOR THE FOLLOWING CONSTITUENTS: CARBON MONOXIDE, OZONE AND NON-METHANE HYDROCARBONS.	PERTAINS TO ANY SITE WHICH WILL EMIT CARBON MONOXIDE, OZONE OR NON-METHANE HYDROCARBONS. CONSIDER FOR FOR SITES WHERE TREATMENT SYSTEMS WILL RESULT IN AIR EMISSIONS	CHEMICAL ACTION
3745 21 05		NON-DEGRADATION POLICY	PROHIBITS SIGNIFICANT AND AVOIDABLE DETERIORATION OF AIR QUALITY	PERTAINS TO ANY SITE WHICH WILL EMIT CARBON OXIDES, CARBON OXIDES, AND NON-METHANE HYDROCARBONS CONSIDER FOR SITES THAT WILL UNDERGO WATER TREATMENT, INCINERATION AND FUEL BURNING (WASTE FUEL RECOVERY)	ACTION
3745 21 07	A,B,G,I,J	ORGANIC MATERIALS EMISSION CONTROL: STATIONARY SOURCES	REQUIRES CONTROL OF EMISSIONS OF ORGANIC MATERIALS FROM STATIONARY SOURCES. REQUIRES BEST AVAILABLE TECHNOLOGY.	PERTAINS TO ANY SITE WHICH IS EMITTING OR WILL EMIT ORGANIC MATERIAL. CONSIDER FOR SITES THAT WILL UNDERGO WATER TREATMENT (AIR STRIPPING), INCINERATION AND FUEL BURNING (WASTE FUEL RECOVERY).	ACTION CHEMICAL
3745 21 08	A E	CARBON MONOXIDE EMISSION CONTROL: STATIONARY SOURCES	REQUIRES ANY STATIONARY SOURCE OF CARBON MONOXIDE TO MINIMIZE EMISSIONS BY THE USE OF BEST AVAILABLE CONTROL TECHNOLOGIES AND OPERATING PRACTICES IN ACCORDANCE WITH BEST CURRENT TECHNOLOGY.	PERTAINS TO ANY SITE WHICH IS EMITTING OR WILL EMIT CARBON MONOXIDE. CONSIDER FOR SITES THAT WILL UNDERGO WATER TREATMENT, INCINERATION AND FUEL BURNING (WASTE FUEL RECOVERY).	ACTION CHEMICAL
3745 21 09		VOC EMISSIONS CONTROL: STATIONARY SOURCES	ESTABLISHES LIMITATIONS FOR EMISSIONS OF VOLATILE ORGANIC COMPOUNDS FROM STATIONARY SOURCES		ACTION

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3745-23-01		NITROGEN DIOXIDE AMBIENT AIR QUALITY STANDARDS	ESTABLISHES A MAXIMUM AMBIENT AIR QUALITY STANDARD FOR NITROGEN DIOXIDE	PERTAINS TO ANY SITE WHICH IS EMITTING OR WILL EMIT NITROGEN DIOXIDE. CONSIDER FOR SITES THAT WILL UNDERGO WATER TREATMENT, INCINERATION AND FUEL BURNING (WASTE FUEL RECOVERY)	CHEMICAL ACTION
3745-23-02	A, B	MEASUREMENT METHODS FOR NITROGEN DIOXIDE	SPECIFIES METHODS OF MEASUREMENT FOR NITROGEN DIOXIDE TO DETERMINE AMBIENT AIR QUALITY	PERTAINS TO ANY SITE WHICH WILL EMIT NITROGEN DIOXIDE. CONSIDER FOR SITES WHERE TREATMENT SYSTEMS MAY RESULT IN NITROGEN DIOXIDE EMISSIONS. ESP. THERMAL TREATMENT SYSTEMS	ACTION CHEMICAL
3745-23-04		NITROGEN DIOXIDE NONDEGRADATION POLICY	PROHIBITS THE SIGNIFICANT AND AVOIDABLE DETERIORATION OF AIR QUALITY BY THE RELEASE OF NITROGEN DIOXIDE EMISSIONS	PERTAINS TO ANY SITE WHICH IS EMITTING OR WILL EMIT NITROGEN DIOXIDE. CONSIDER FOR SITES THAT WILL UNDERGO WATER TREATMENT, INCINERATION AND FUEL BURNING (WASTE FUEL RECOVERY)	ACTION CHEMICAL
3745-23-06		NITROGEN OXIDES EMISSION CONTROLS. STATIONARY SOURCE	REQUIRES THAT ALL STATIONARY SOURCES OF NITROGEN OXIDE MINIMIZE EMISSIONS BY THE USE OF THE LATEST AVAILABLE CONTROL TECHNIQUES AND OPERATING PRACTICES IN ACCORDANCE WITH BEST CURRENT TECHNOLOGY. ESTABLISHES LIMIT FOR NITROGEN OXIDE EMISSIONS FROM COMBUSTION	PERTAINS TO ANY SITE WHICH WILL EMIT NITROGEN OXIDES. CONSIDER FOR SITES WHERE TREATMENT SYSTEMS WILL RESULT IN NITROGEN OXIDE EMISSIONS. ESP. THERMAL TREATMENT.	ACTION CHEMICAL
3745-25-03		EMISSION CONTROL ACTION PROGRAMS	REQUIRES PREPARATION FOR AIR POLLUTION ALERTS, WARNINGS AND EMERGENCIES.	PERTAINS TO ANY SITE WHICH IS EMITTING OR MAY EMIT AIR CONTAMINANTS	ACTION
3745-27-03	B	EXEMPTIONS TO SOLID WASTE REGULATIONS	DEFINES EXEMPTIONS TO SOLID WASTE REGULATIONS AND ESTABLISHES LIMITATIONS ON TEMPORARY STORAGE OF PUTRESCIBLE WASTE OR ANY SOLID WASTE WHICH CAUSES A NUISANCE OR HEALTH HAZARD. STORAGE OF PUTRESCIBLE WASTE BEYOND SEVEN DAYS IS CONSIDERED OPEN DUMPING	PERTAINS TO ANY SITE AT WHICH SOLID WASTE WILL BE MANAGED. CONSIDER ESPECIALLY FOR OLD LANDFILLS WHERE SOLID WASTE MAY BE EXCAVATED AND/OR CONSOLIDATED	ACTION
3745-27-05	A, B, C	AUTHORIZED, LIMITED & PROHIBITED SOLID WASTE DISPOSAL	ESTABLISHES ALLOWABLE METHODS OF SOLID WASTE DISPOSAL. SANITARY LANDFILL, INCINERATION, COMPOSTING. PROHIBITS MANAGEMENT BY OPEN BURNING AND OPEN DUMPING	PERTAINS TO ANY SITE AT WHICH SOLID WASTES WILL BE MANAGED. PROHIBITS MANAGEMENT BY OPEN BURNING AND OPEN DUMPING.	ACTION
3745-27-06	B, C	REQUIRED TECHNICAL INFORMATION FOR SANITARY LANDFILLS	SPECIFIES THE MINIMUM TECHNICAL INFORMATION REQUIRED OF A SOLID WASTE PERMIT TO INSTALL. INCLUDED ARE A HYDROGEOLOGIC INVESTIGATION REPORT, LEACHATE PRODUCTION AND MIGRATION INFORMATION, SURFACE WATER DISCHARGE INFORMATION, DESIGN CALCULATIONS, PLAN DRAWINGS	THIS PARAGRAPH PRESENTS SUBSTANTIVE REQUIREMENTS OF A SOLID WASTE PERMIT TO INSTALL. PERTAINS TO ANY NEW SOLID WASTE DISPOSAL FACILITY CREATED ON-SITE AND EXPANSIONS OF EXISTING SOLID WASTE LANDFILLS. ALSO PERTAINS TO EXISTING AREAS OF CONTAMINATION THAT ARE CAPPED PER SOLID WASTE RULES. THIS RULE ESTABLISHES THE MINIMUM INFORMATION REQUIRED DURING THE REMEDIAL DESIGN STAGE.	ACTION
3745-27-07	A, B	LOCATION CRITERIA FOR SOLID WASTE DISPOSAL PERMIT	SPECIFIES LOCATIONS IN WHICH SOLID WASTE LANDFILLS ARE NOT TO BE SITED. INCLUDES FLOODPLAINS, SAND OR GRAVEL PITS, LIMESTONE OR SANDSTONE QUARRIES, AREAS ABOVE SOLE SOURCE AQUIFERS, WETLANDS, ETC.	THIS RULE PREVENTS THE ESTABLISHMENT OF NEW SOLID WASTE LANDFILLS AND EXPANSIONS OF EXISTING SOLID WASTE LANDFILLS IN CERTAIN UNFAVORABLE LOCATIONS. ALSO MAY PROHIBIT THE LEAVING OF WASTE IN PLACE IN CERTAIN UNFAVORABLE LOCATIONS	LOCATION
3745-27-07	D, F, G, H	ADDITIONAL CRITERIA FOR SANITARY LANDFILL APPROVAL	ADDITIONAL SITING REQUIREMENTS WITH RESPECT TO GEOLOGY, WATER SUPPLIES, OCCUPIED PROPERTIES, PARKLANDS AND MINE SUBSIDENCE AREAS. GOVERNS EXPANSION OF EXISTING SITES	PERTAINS TO NEW SANITARY LANDFILLS FOR SOLID WASTE DISPOSAL AND EXPANSIONS OF EXISTING FACILITIES	LOCATION ACTION

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3745 27 08	C D H	CONSTRUCTION SPECIFICATIONS FOR SANITARY LANDFILLS	SPECIFIES THE MINIMUM REQUIREMENTS FOR THE SOIL/CLAY LAYERS, GRANULAR DRAINAGE LAYER, GEOSYNTHETICS, LEACHATE MANAGEMENT SYSTEM, GAS MONITORING SYSTEM, ETC ALSO ESTABLISHES CONSTRUCTION REQUIREMENTS FOR FACILITIES TO BE LOCATED IN GEOLOGICALLY UNFAVORABLE AREAS	PERTAINS TO ANY NEW SOLID WASTE DISPOSAL FACILITY CREATED ON-SITE AND ANY EXPANSIONS TO EXISTING SOLID WASTE LANDFILLS PORTIONS ALSO PERTAIN TO AREAS OF CONTAMINATION THAT ARE CAPPED PER SOLID WASTE RULES MAY SERVE AS SITING CRITERIA	ACTION
3745:27:10	B.C.D	SANITARY LANDFILL GROUND WATER MONITORING	GROUND WATER MONITORING PROGRAM MUST BE ESTABLISHED FOR ALL SANITARY LANDFILL FACILITIES THE SYSTEM MUST CONSIST OF A SUFFICIENT NUMBER OF WELLS THAT ARE LOCATED SO THAT SAMPLES INDICATE BOTH UPGRADIENT (BACKGROUND) AND DOWNGRADIENT WATER SAMPLES THE SYSTEM MUST BE DESIGNED PER THE MINIMUM REQUIREMENTS SPECIFIED IN THIS RULE. THE SAMPLING AND ANALYSIS PROCEDURES USED MUST COMPLY WITH THIS RULE.	PERTAINS TO ANY NEW SOLID WASTE FACILITY AND ANY EXPANSIONS OF EXISTING SOLID WASTE LANDFILLS ON-SITE. ALSO MAY PERTAIN TO EXISTING AREAS OF CONTAMINATION THAT ARE CAPPED IN-PLACE PER THE SOLID WASTE RULES	ACTION
3745 27 11	B.G	FINAL CLOSURE OF SANITARY LANDFILL FACILITIES	REQUIRES CLOSURE OF A LANDFILL IN A MANNER WHICH MINIMIZES THE NEED FOR POST-CLOSURE MAINTENANCE AND MINIMIZES POST-CLOSURE FORMATION AND RELEASE OF LEACHATE AND EXPLOSIVE GASES TO AIR, SOIL GROUND WATER OR SURFACE WATER. SPECIFIES ACCEPTABLE CAP DESIGN, SOIL BARRIER LAYER, GRANULAR DRAINAGE LAYER, SOIL AND VEGETATIVE LAYER PROVIDES FOR USE OF COMPARABLE MATERIALS TO THOSE SPECIFIED WITH APPROVAL OF DIRECTOR.	SUBSTANTIVE REQUIREMENTS PERTAIN TO ANY NEW SOLID WASTE LANDFILLS CREATED ON-SITE, ANY EXPANSIONS OF EXISTING SOLID WASTE LANDFILLS ON-SITE AND ANY EXISTING AREAS OF CONTAMINATION THAT ARE CAPPED IN-PLACE PER THE SOLID WASTE RULES.	ACTION
3745 27 12	A,B,D,E,MN	SANITARY LANDFILL - EXPLOSIVE GAS MONITORING	ESTABLISHES WHEN AN EXPLOSIVE GAS MONITORING PLAN IS REQUIRED FOR SOLID WASTE LANDFILLS SPECIFIES THE MINIMUM INFORMATION REQUIRED IN SUCH A PLAN, INCLUDING DETAILED ENGINEERING PLANS, SPECIFICATIONS, INFORMATION ON GAS GENERATION POTENTIAL, SAMPLING AND MONITORING PROCEDURES, ETC MANDATES WHEN REPAIRS MUST BE MADE TO AN EXPLOSIVE GAS MONITORING SYSTEM THIS RULE ONLY APPLIES TO LANDFILLS WHICH RECEIVED "PUTRESCIBLE" SOLID WASTES	PERTAINS TO ANY SITE WHICH HAS HAD OR WILL HAVE PUTRESCIBLE SOLID WASTES PLACED ON-SITE AND WHICH HAS A RESIDENCE OR OTHER OCCUPIED STRUCTURE LOCATED WITHIN 1000 FEET OF THE EMPLACED SOLID WASTE	ACTION LOCATION
3745 27 12	I, J	EXPLOSIVE GAS MONITORING FOR SANITARY LANDFILLS	IDENTIFIES PARAMETERS AND SCHEDULE FOR EXPLOSIVE GAS MONITORING	PERTAINS TO ANY DISPOSAL SITE WHERE EXPLOSIVE GAS GENERATION AND MIGRATION MAY BE A THREAT.	ACTION CHEMICAL
3745 27 13	C	DISTURBANCES WHERE HAZ OR SOLID WASTE FAC WAS OPERATED	REQUIRES THAT A DETAILED PLAN BE PROVIDED TO DESCRIBE HOW ANY PROPOSED FILLING, GRADING, EXCAVATING, BUILDING, DRILLING OR MINING ON LAND WHERE A HAZARDOUS WASTE FACILITY OR SOLID WASTE FACILITY WAS OPERATED WILL BE ACCOMPLISHED THIS INFORMATION MUST DEMONSTRATE THAT THE PROPOSED ACTIVITIES WILL NOT CREATE A NUISANCE OR ADVERSELY AFFECT THE PUBLIC HEALTH OR THE ENVIRONMENT. SPECIAL TERMS TO CONDUCT SUCH ACTIVITIES MAY BE IMPOSED BY THE DIRECTOR TO PROTECT THE PUBLIC AND THE ENVIRONMENT.	PERTAINS TO ANY SITE AT WHICH HAZARDOUS OR SOLID WASTE HAS BEEN MANAGED, EITHER INTENTIONALLY OR OTHERWISE. DOES NOT PERTAIN TO AREAS THAT HAVE HAD ONE-TIME LEAKS OR SPILLS.	ACTION LOCATION
3745 27 14	A	POST-CLOSURE CARE OF SANITARY LANDFILL FACILITIES	SPECIFIES THE REQUIRED POST-CLOSURE CARE FOR SOLID WASTE FACILITIES INCLUDES CONTINUING OPERATION OF LEACHATE AND SURFACE WATER MANAGEMENT SYSTEMS, MAINTENANCE OF THE CAP SYSTEM AND GROUND WATER MONITORING	SUBSTANTIVE REQUIREMENTS PERTAIN TO ANY NEWLY CREATED SOLID WASTE LANDFILLS ON-SITE, ANY EXPANSIONS OF EXISTING SOLID WASTE LANDFILLS ON-SITE AND ANY EXISTING AREAS OF CONTAMINATION THAT ARE CAPPED PER THE SOLID WASTE RULES	ACTION

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3745 27 18	A D	SOLID WASTE INCINERATOR & COMPOSTING OPERATIONS	ESTABLISHES OPERATIONAL REQUIREMENTS FOR SOLID WASTE INCINERATORS AND COMPOSTING FACILITIES.	PERTAINS TO ANY SITE AT WHICH SOLID WASTE WILL BE EITHER INCINERATED OR COMPOSTED ON-SITE	ACTION
3745 27-19	E	SANITARY LANDFILL GENERAL OPERATIONAL REQUIREMENTS	SPECIFIES GENERAL OPERATIONAL REQUIREMENTS FOR SOLID WASTE LANDFILLS. INCLUDES REQUIREMENTS FOR PREPARATIONS FOR OPERATING DURING INCLEMENT WEATHER, MANAGEMENT TO MINIMIZE NOISE, DUST AND ODORS; VECTOR CONTROL, ADEQUATE FIRE CONTROL EQUIPMENT, NOT CAUSING A NUISANCE OR HEALTH HAZARD OR WATER POLLUTION; MINIMIZATION OF DISTURBED AREA; CHEMICAL COMPATABILITY TESTING, IF NECESSARY. SPECIFIES THAT BULK LIQUIDS, HAZARDOUS WASTE, PCBs AND INFECTIOUS WASTE MAY NOT BE ACCEPTED FOR DISPOSAL.	PERTAINS TO NEW SOLID WASTE DISPOSAL FACILITIES TO BE CREATED ON-SITE AND EXISTING LANDFILLS THAT WILL BE EXPANDED DURING REMEDIATION. PORTIONS ALSO MAY PERTAIN TO EXISTING AREAS OF CONTAMINATION THAT WILL BE CAPPED IN PLACE PER SOLID WASTE RULES.	ACTION
3745 27 19	D(2)	SANITARY LANDFILL OPERATIONS - CONSTRUCTION COMPLIANCE	REQUIRES THE OWNER/OPERATOR TO IMPLEMENT MEASURES TO ATTAIN COMPLIANCE WITH REQUIREMENTS OF THESE RULES IN THE EVENT THAT TESTING INDICATES THAT A COMPONENT OR PORTION OF THE LANDFILL HAVE NOT BEEN CONSTRUCTED IN ACCORDANCE WITH THOSE RULES.	PERTAINS TO "NEW" SOLID WASTE DISPOSAL FACILITIES TO BE CREATED ON-SITE AND EXISTING LANDFILLS THAT WILL BE EXPANDED DURING REMEDIATION. ALSO PERTAINS TO CONSTRUCTION OF FINAL COVER SYSTEMS.	ACTION
3745 27 19	H	SANITARY LANDFILL OPERATIONS - FINAL COVER	INCLUDES REQUIREMENTS FOR THE FINAL CAP SYSTEM FOR AREAS AT FINAL ELEVATIONS.	PERTAINS TO NEW SOLID WASTE DISPOSAL FACILITIES TO BE CREATED ON-SITE AND EXISTING LANDFILLS THAT WILL BE EXPANDED DURING REMEDIATION. PORTIONS ALSO MAY PERTAIN TO EXISTING AREAS OF CONTAMINATION THAT WILL BE CAPPED IN PLACE PER SOLID WASTE RULES.	ACTION
3745 27 19	L	SANITARY LANDFILL OPERATIONS - PCBs AND HAZARDOUS WASTE	REQUIRES OWNERS/OPERATORS TO CONDUCT A PROGRAM TO DETECT PCB WASTE AND HAZARDOUS WASTE PRIOR TO DISPOSAL UPON DETECTION OR SUSPECTED DETECTION OF SUCH WASTES. REQUIRES THOSE WASTES TO NOT BE PLACED AT THE WORKING FACE OF THE LANDFILL AND TO MANAGE THOSE WASTES IN ACCORDANCE WITH APPLICABLE LAWS AND REGULATIONS	PERTAINS TO NEW SOLID WASTE DISPOSAL FACILITIES TO BE CREATED ON-SITE AND EXISTING LANDFILLS THAT WILL BE EXPANDED DURING REMEDIATION.	ACTION
3745-27-19	J	SANITARY LANDFILL OPERATIONS - SURFACE WATER MGMT	SURFACE WATER MUST BE DIVERTED FROM AREAS WHERE SOLID WASTE IS BEING, OR HAS BEEN, DEPOSITED. ALSO REQUIRES RUN ON AND RUN OFF TO BE CONTROLLED TO MINIMIZE INFILTRATION THROUGH THE COVER MATERIALS AND TO MINIMIZE EROSION OF THE CAP SYSTEM	PERTAINS TO NEW SOLID WASTE DISPOSAL FACILITIES TO BE CREATED ON SITE AND EXISTING LANDFILLS THAT WILL BE EXPANDED DURING REMEDIATION. PORTIONS ALSO MAY PERTAIN TO EXISTING AREAS OF CONTAMINATION THAT WILL BE CAPPED IN-PLACE PER SOLID WASTE RULES	ACTION
3745 27-19	K	SANITARY LANDFILL OPERATIONS - LEACHATE MANAGEMENT	REQUIRES REPAIR OF LEACHATE OUTBREAKS; COLLECTION AND TREATMENT OF LEACHATE ON THE SURFACE OF THE LANDFILL, AND ACTIONS TO MINIMIZE, CONTROL OR ELIMINATE CONDITIONS CAUSING LEACHATE OUTBREAKS	PERTAINS TO NEW SOLID WASTE DISPOSAL FACILITIES TO BE CREATED ON-SITE AND EXISTING LANDFILLS THAT WILL BE EXPANDED DURING REMEDIATION. PORTIONS ALSO MAY PERTAIN TO EXISTING AREAS OF CONTAMINATION THAT WILL BE CAPPED IN PLACE PER SOLID WASTE RULES.	ACTION
3745 27 20		SANITARY LANDFILLS - PROHIBITIONS AND CLOSURE	SPECIFIES CERTAIN OPERATIONAL AND LOCATION STANDARDS FOR LANDFILLS ACCEPTING WASTE AFTER JUNE 1, 1994. ALSO REQUIRES CLOSURE OF EXISTING UNITS WHICH DO NOT MEET THOSE STANDARDS BY OCTOBER 6, 1996.	PERTAINS TO NEW SOLID WASTE DISPOSAL FACILITIES TO BE CREATED ON SITE AND EXISTING LANDFILLS THAT WILL BE EXPANDED DURING REMEDIATION. PORTIONS	ACTION

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3745 27 20	A, B, C	PROHIBITIONS AND CLOSURE	RULES FOR NEW AND EXISTING SITES. LOCATION RULES WITH RESPECT OT FLOOD PLAINS, AIRPORTS, GEOLOGIC FAULTS PLUS LINER /LEACHATE REQUIREMENTS	PERTAINS TO SOLID WASTE LANDFILLS OPENED AFTER 06/01/94 OR EXISTING FACILITIES RECEIVING WASTE AFTER 06/01/94.	LOCATION ACTION
3745 27 51	C, D, I, J, K, L, M, N	ADDITIONAL CRITERIA FOR SOLID WASTE INCINERATOR PTI	RULES FOR LOCATION OF INCINERATOR (SETBACK FROM WATER SUPPLIES, FLOODPLAINS, PARKLANDS, DOMICILES) CONSTRUCTION GUIDELINES INCLUDING LEACHATE CONTROL SYSTEM	PERTAINS TO SOLID WASTE INCINERATORS WHICH MAY BE CONSTRUCTED AS PART OF REMEDIATION EFFORTS AT SITE.	
3745 27 52	A, Z	OPERATION OF SOLID WASTE INCINERATOR FACILITIES	RULES FOR SAFE OPERATION OF INCINERATOR INCLUDING ACCESS CONTROL, FIRE CONTROL, RECORD KEEPING, EMERGENCY PLANS, ON-SITE STORAGE, WASTES FORBIDDEN FROM INCINERATION, GROUNDWATER MONITORING, LEACHATE CONTROL, WASTE HANDLING.	PERTAINS TO INCINERATORS WHICH MAY BE CONSTRUCTED AS PART OF ON-SITE REMEDIATION EFFORTS.	
3745 27 53	C, D	FINAL CLOSURE, SOLID WASTE INCINERATOR	REQUIRES INCINERATOR SITE TO BE DECONTAMINATED UPON CLOSURE AND LEACHATE SYSTEM DECOMMISSIONED TO PREVENT FUTURE POLLUTION PROBLEMS	APPLICABLE TO SITES WHICH INCINERATED HAZARDOUS WASTES	
3745 31 05		WATER/AIR PERMIT CRITERIA FOR DECISION BY THE DIRECTOR	A PERMIT TO INSTALL (PTI) OR PLANS MUST DEMONSTRATE BEST AVAILABLE TECHNOLOGY (BAT) AND SHALL NOT INTERFER WITH OR PREVENT THE ATTAINMENT OR MAINTENANCE OF APPLICABLE AMBIENT AIR QUALITY STANDARDS.	PERTAINS TO ANY SITE THAT WILL DISCHARGE TO ON-SITE SURFACE WATER OR WILL EMIT CONTAMINANTS INTO THE AIR.	ACTION
3745 32 05		WATER QUALITY CRITERIA FOR DECISION BY THE DIRECTOR	SPECIFIES SUBSTANTIVE CRITERIA FOR SECTION 401 WATER QUALITY CRITERIA FOR DREDGING, FILLING, OBSTRUCTIONG OR ALTERING WATERS OF THE STATE	PERTAINS TO ANY SITE THAT HAS OR WILL AFFECT WATERS OF THE STATE.	ACTION
3745 34 06		PROHIBITION OF UNAUTHORIZED INJECTION	UNDERGROUND INJECTION IS PROHIBITED WITHOUT AUTHORIZATION FROM THE DIRECTOR.	PERTAINS TO SITES AT WHICH MATERIALS ARE TO BE INJECTED UNDERGROUND CONSIDER FOR TECHNOLOGIES SUCH AS BIOREMEDIATION AND SOIL FLUSHING	ACTION
3745 34 07		NO MOVEMENT OF FLUID INTO UNDERGROUND DRINKING WATER	THE UNDERGROUND INJECTION OF FLUID CONTAINING ANY CONTAMINANT INTO AN UNDERGROUND SOURCE OF DRINKING WATER IS PROHIBITED IF THE PRESENCE OF THAT CONTAMINANT MAY CAUSE A VIOLATION OF THE PRIMARY DRINKING WATER STANDARDS OR OTHER WISE ADVERSELY AFFECT THE HEALTH OF PERSONS	PERTAINS TO SITES AT WHICH MATERIALS ARE TO BE INJECTED UNDERGROUND CONSIDER FOR TECHNOLOGIES SUCH AS BIOREMEDIATION AND SOIL FLUSHING	
3745 50 221	A, B	PETITIONS TO EXCLUDE A LISTED WASTE AT A FACILITY	ALLOWS FOR PETITIONS TO EXCLUDE HAZARDOUS WASTES FROM A PARTICULAR FACILITY FROM THE LISTS IN RULES 3745 51-30 TO 3745 51-31 OF THE OAC. ALSO STATES THAT OHIO EPA WILL RECOGNIZE USEPA'S DECISION TO GRANT OR DENY SUCH PETITIONS ON THE FEDERAL LEVEL	PERTAINS TO ANY SITE WHICH HAS WASTES THAT WILL BE DELISTED BY USEPA SHOULD OHIO LIST WASTES NOT ADDRESSED BY USEPA, THIS RULE WOULD ALLOW OHIO EPA THE OPPORTUNITY TO DELIST THESE WASTES	ACTION
3745 50 311	A, B, C	RECYCLING VARIANCES FROM CLASSIFICATION AS A WASTE			
3745 50 312	A, B, C	STDS & CRITERIA FOR VARIANCES FROM CLASS AS A WASTE	PRESENTS CRITERIA BY WHICH DIRECTOR MAY GHANT REQUESTS FOR VARIANCE FROM CLASSIFYING CERTAIN MATERIALS AS A WASTE	PERTAINS TO ANY SITE THAT HAS WASTES THAT MAY BE RECYCLED OR RECLAIMED	ACTION CHEMICAL

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3745 50 315	A	ADD'L REG OF CERTAIN HAZ WASTE RECYCLING ACTIVITIES	DIRECTOR MAY REGULATE HAZARDOUS WASTES OTHERWISE EXEMPTED BECAUSE OF RECYCLING ACTIVITIES AS HAZARDOUS WASTES ON A CASE BY CASE BASIS. THE CRITERIA TO MAKE THIS DECISION ARE PROVIDED BY THIS RULE.	PERTAINS TO ANY SITE THAT HAS HAZARDOUS WASTES THAT WILL BE EXEMPTED FROM THE HAZARDOUS WASTE RULES PER OAC 3745-51-06 (RECYCLING EXEMPTIONS)	ACTION CHEMICAL
3745 50 44	A	PERMIT INFO REQUIRED FOR ALL HAZ WASTE FACILITIES	ESTABLISHES THE SUBSTANTIVE HAZARDOUS WASTE PERMIT REQUIREMENTS NECESSARY FOR OHIO EPA TO DETERMINE FACILITY COMPLIANCE. INCLUDES INFORMATION SUCH AS FACILITY DESCRIPTION, WASTE CHARACTERISTICS, EQUIPMENT DESCRIPTIONS, CONTINGENCY PLAN, FACILITY LOCATION, TOPOGRAPHIC MAP, ETC.	PERTAINS TO ANY SITE WHICH WILL HAVE TREATMENT, STORAGE OR DISPOSAL OF HAZARDOUS WASTE OCCURRING ON-SITE OR HAS EXISTING AREAS OF HAZARDOUS WASTE CONTAMINATION ON SITE THAT WILL BE CAPPED IN-PLACE. THIS, ALONG WITH OTHER PARAGRAPHS OF THIS RULE, ESTABLISHES THE MINIMUM INFORMATION REQUIRED DURING THE REMEDIAL DESIGN STAGE.	ACTION
3745 50 44	B	PERMIT INFO REQ FOR ALL HAZ WASTE LAND DISP FACILITIES	ESTABLISHES THE SUBSTANTIVE HAZARDOUS WASTE LAND DISPOSAL PERMIT REQUIREMENTS NECESSARY FOR OHIO EPA TO DETERMINE ADEQUATE PROTECTION OF THE GROUND WATER. INCLUDES INFORMATION SUCH AS GROUND WATER MONITORING DATA, INFORMATION ON INTERCONNECTED AQUIFERS, PLUME(S) OF CONTAMINATION, PLANS AND REPORTS ON GROUND WATER MONITORING PROGRAM, ETC.	PERTAINS TO ANY FACILITY/SITE WHICH WILL HAVE HAZARDOUS WASTE DISPOSED OF ON SITE OR HAS EXISTING AREAS OF HAZARDOUS WASTE CONTAMINATION ON SITE THAT WILL BE CAPPED IN PLACE. THIS, ALONG WITH OTHER PARAGRAPHS OF THIS RULE, ESTABLISHES THE MINIMUM INFORMATION REQUIRED DURING THE REMEDIAL DESIGN STAGE.	ACTION
3745 50 44	C1	ADD'L PERMIT INFO: HAZ WASTE STORAGE IN CONTAINERS	ESTABLISHES THE SUBSTANTIVE HAZARDOUS WASTE PERMIT REQUIREMENTS NECESSARY FOR OHIO EPA TO DETERMINE ADEQUACY OF CONTAINER STORAGE. INCLUDES INFORMATION SUCH AS DESCRIPTION OF CONTAINMENT SYSTEM, DETAILED DRAWINGS, ETC. SEE OAC 3745-55-70 THROUGH 3745 55 78 FOR ADDITIONAL CONTAINER REQUIREMENTS.	PERTAINS TO ANY SITE AT WHICH STORAGE OF HAZARDOUS WASTE ON SITE WILL OCCUR IN CONTAINERS. CONSIDER FOR WASTES AND CONTAMINATED SOILS THAT ARE STORED PRIOR TO TREATMENT OR DISPOSAL. THIS, ALONG WITH OTHER PARAGRAPHS OF THIS RULE AND OAC 3745-55-70 THROUGH 3745-55-78, ESTABLISHES THE MINIMUM INFORMATION REQUIRED DURING THE REMEDIAL DESIGN STAGE.	ACTION
3745 50 44	C2	ADD'L PERMIT INFO HAZ WASTE STORAGE/ TREAT IN TANKS	ESTABLISHES SUBSTANTIVE HAZARDOUS WASTE PERMIT REQUIREMENTS NECESSARY FOR OHIO EPA TO DETERMINE ADEQUACY OF TANK TREATMENT AND STORAGE UNITS. INCLUDES INFORMATION SUCH AS ASSESSMENT OF STRUCTURAL INTEGRITY, DETAILED PLANS OF TANK SYSTEM(S), DESCRIPTION OF SECONDARY CONTAINMENT SYSTEM, ETC. SEE OAC 3745-55-90 THROUGH 3746 55 99 FOR ADDITIONAL REQUIREMENTS.	PERTAINS TO ANY SITE AT WHICH STORAGE OR TREATMENT OF HAZARDOUS WASTE IN TANKS WILL OCCUR ON-SITE. THIS, ALONG WITH OTHER PARAGRAPHS OF THIS RULE AND OAC 3745-55-90 THROUGH 3745 55-99, ESTABLISHES THE MINIMUM INFORMATION REQUIRED DURING THE REMEDIAL DESIGN STAGE.	ACTION
3745 50-44	C3	ADD'L PERMIT INFO HAZ WASTE STOR/TREAT IN SURF IMPOUND	ESTABLISHES SUBSTANTIVE HAZARDOUS WASTE PERMIT REQUIREMENTS NECESSARY FOR OHIO EPA TO DETERMINE ADEQUACY OF BOTH NEW SURFACE IMPOUNDMENTS AND EXTENSIONS OF EXISTING SURFACE IMPOUNDMENTS USED TO STORE OR TREAT HAZARDOUS WASTE. INCLUDES INFORMATION SUCH AS WASTE CHARACTERISTICS, DETAILED PLANS AND REPORTS, INFORMATION ON STRUCTURAL INTEGRITY, CLOSURE INFORMATION, ETC. SEE OAC 3745-56-20 THROUGH 3745-56-33 FOR ADDITIONAL SURFACE IMPOUNDMENT REQUIREMENTS.	PERTAINS TO ANY SITE AT WHICH EITHER A NEW SURFACE IMPOUNDMENT WILL BE INSTALLED OR AN EXISTING SURFACE IMPOUNDMENT WILL BE EXPANDED. THIS, ALONG WITH OTHER PARAGRAPHS OF THIS RULE AND OAC 3745-20-50 THROUGH 3745-33-80, ESTABLISHES THE MINIMUM INFORMATION REQUIRED DURING THE REMEDIAL DESIGN STAGE.	ACTION
3745 50 44	C4	ADD'L PERMIT INFO: HAZ WASTE STOR/TREAT IN WASTE PILES	ESTABLISHES SUBSTANTIVE HAZARDOUS WASTE PERMIT REQUIREMENTS NECESSARY FOR OHIO EPA TO DETERMINE ADEQUACY OF SURFACE IMPOUNDMENTS USED TO TREAT OR STORE HAZARDOUS WASTE. INCLUDES INFORMATION SUCH AS WASTE CHARACTERISTICS, DETAILED DESIGN PLANS AND REPORTS, CONTROL OF RUN ON AND RUN OFF, CLOSURE INFORMATION, ETC. SEE OAC 3745-56 20 THROUGH 3745-56 33 FOR ADDITIONAL SURFACE IMPOUNDMENT REQUIREMENTS.	PERTAINS TO SITE AT WHICH HAZARDOUS WASTE WILL BE STORED OR TREATED IN SURFACE IMPOUNDMENTS. THIS, ALONG WITH OTHER PARAGRAPHS OF THIS RULE AND OAC 3745 56-20 THROUGH 3745-56-33, ESTABLISHES THE MINIMUM INFORMATION REQUIRED DURING THE REMEDIAL DESIGN STAGE.	ACTION

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3745-50-44	C5	ADD'L PERMIT INFO HAZ WASTE TREAT/DISP BY LAND TREAT	ESTABLISHES SUBSTANTIVE HAZARDOUS WASTE PERMIT REQUIREMENTS NECESSARY FOR OHIO EPA TO DETERMINE ADEQUACY OF LAND TREATMENT TO TREAT OR DISPOSE OF HAZARDOUS WASTES INCLUDES INFORMATION SUCH AS WASTE CHARACTERISTICS, DESIGN MEASURES TO MAXIMIZE TREATMENT, DIMENSIONS OF TREATMENT ZONE, DESIGN OF UNIT, INFORMATION ON POTENTIAL CROPS, ETC SEE OAC 3745-58 70 THROUGH 3745 56 83 FOR ADDITIONAL LAND TREATMENT REQUIREMENTS	PERTAINS TO ANY SITE AT WHICH LAND TREATMENT WILL BE USED TO TREAT OR DISPOSE OF HAZARDOUS WASTES THIS, ALONG WITH OTHER PARAGRAPHS OF THIS RULE AND OAC 3745 20-50 THROUGH 3745-33 60, ESTABLISHES THE MINIMUM INFORMATION REQUIRED DURING THE REMEDIAL DESIGN STAGE.	ACTION
3745 50 44	C6	ADD'L PERMIT INFO. ENVIRONMENTAL PERFORMANCE STANDARDS	ESTABLISHES SUBSTANTIVE HAZARDOUS WASTE PERMIT REQUIREMENTS NECESSARY FOR OHIO EPA TO DETERMINE ADEQUACY OF SURFACE IMPOUNDMENTS, WASTE PILES, LAND TREATMENT UNITS, LANDFILLS, AND UNDERGROUND INJECTION WELLS USED TO TREAT, STORE OR DISPOSE OF HAZARDOUS WASTE INCLUDES INFORMATION SUCH AS WASTE CHARACTERISTICS, DETAILED DESIGN PLANS AND REPORTS, CONTROL OF RUN-ON AND RUN OFF, CLOSURE INFORMATION, ETC SEE OAC 3745-57-01 ADDITIONAL REQUIREMENTS	PERTAINS TO SITE AT WHICH HAZARDOUS WASTE WILL BE OR HAS BEEN STORED, TREATED OR DISPOSED OF IN SURFACE IMPOUNDMENTS, WASTE PILES, LAND TREATMENT UNITS, LANDFILLS OR UNDERGROUND INJECTION WELLS THIS, ALONG WITH OTHER PARAGRAPHS OF THIS RULE AND OAC 3745 57-01 ESTABLISHES THE MINIMUM INFORMATION REQUIRED DURING THE REMEDIAL DESIGN STAGE.	ACTION
3745 50 44	C7	ADD'L PERMIT INFO. HAZ WASTE DISPOSAL IN LANDFILLS	ESTABLISHES SUBSTANTIVE HAZARDOUS WASTE PERMIT REQUIREMENTS NECESSARY FOR OHIO EPA TO DETERMINE ADEQUACY OF LANDFILLS USED FOR DISPOSAL OF HAZARDOUS WASTE. INCLUDES INFORMATION SUCH AS WASTE CHARACTERISTICS, DETAILED DESIGN PLANS AND REPORTS, CONTROL OF RUN ON AND RUN OFF, CLOSURE INFORMATION, ETC.. SEE OAC 3745 57 02 THROUGH 3745-57 18 FOR ADDITIONAL LANDFILL REQUIREMENTS	PERTAINS TO SITE AT WHICH HAZARDOUS WASTE WILL BE OR HAS BEEN DISPOSED OF IN LANDFILLS THIS, ALONG WITH OTHER PARAGRAPHS OF THIS RULE AND OAC 3745-57-02 THROUGH 3745-57 18, ESTABLISHES THE MINIMUM INFORMATION REQUIRED DURING THE REMEDIAL DESIGN STAGE	ACTION
3745 50 44	C8	ADD L PERMIT INFO. HAZ WASTE TREATMENT BY INCINERATION	ESTABLISHES SUBSTANTIVE HAZARDOUS WASTE PERMIT REQUIREMENTS NECESSARY FOR OHIO EPA TO DETERMINE ADEQUACY OF INCINERATORS USED TO TREAT HAZARDOUS WASTE INCLUDES INFORMATION SUCH AS WASTE CHARACTERISTICS, DETAILED DESIGN PLANS AND REPORTS, TRIAL BURN DATA, CLOSURE INFORMATION, ETC... SEE OAC 3745-57-40 THROUGH 3745-57-51 FOR ADDITIONAL INCINERATOR REQUIREMENTS.	PERTAINS TO SITE AT WHICH HAZARDOUS WASTE WILL BE TREATED BY INCINERATION THIS, ALONG WITH OTHER PARAGRAPHS OF THIS RULE AND OAC 3745 57-40 THROUGH 3745-57-51, ESTABLISHES THE MINIMUM INFORMATION REQUIRED DURING THE REMEDIAL DESIGN STAGE.	ACTION 7
3745 50 44	C9	ADD'L PERMIT INFO HAZ WASTE T/S/D IN MISC UNITS	ESTABLISHES SUBSTANTIVE HAZARDOUS WASTE PERMIT REQUIREMENTS NECESSARY FOR OHIO EPA TO DETERMINE ADEQUACY OF MISCELLANEOUS UNITS USED TO TREAT OR STORE HAZARDOUS WASTE INCLUDES INFORMATION SUCH AS WASTE CHARACTERISTICS, DETAILED DESIGN PLANS AND REPORTS, CONTROL OF RUN ON AND RUN-OFF, CLOSURE INFORMATION, ETC SEE OAC 3745 57 90 THROUGH 3745 57 93 FOR ADDITIONAL REQUIREMENTS FOR MISCELLANEOUS UNITS	PERTAINS TO FACILITY/SITE AT WHICH HAZARDOUS WASTE WILL BE STORED, TREATED OR DISPOSED OF IN MISCELLANEOUS UNITS. THIS, ALONG WITH OTHER PARAGRAPHS OF THIS RULE AND OAC 3745-57 90 THROUGH 3745-57-93, ESTABLISHES THE MINIMUM INFORMATION REQUIRED DURING THE REMEDIAL DESIGN STAGE	ACTION

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3745 50 58	E.I.J	HAZARDOUS WASTE FACILITY PERMIT CONDITIONS	ESTABLISHES GENERAL PERMIT CONDITIONS APPLIED TO ALL HAZARDOUS WASTE FACILITIES IN OHIO INCLUDES CONDITIONS SUCH AS OPERATION AND MAINTENANCE, SITE ACCESS, MONITORING, ETC	PERTAINS TO ALL ALTERNATIVES THAT WILL INCORPORATE TREATMENT, STORAGE OR DISPOSAL OF HAZARDOUS WASTE	ACTION
3745 50 62	A.B.C.D	TRIAL BURN FOR INCINERATORS	SPECIFIES REQUIREMENTS OF A TRIAL BURN	PERTAINS TO ANY ALTERNATIVE INCORPORATING ON SITE INCINERATION.	ACTION
3745 51 05	A J	REQ FOR CONDITIONALLY EXEMPT SMALL QUANTITY GENERATORS	SPECIFIES REQUIREMENTS FOR CONDITIONALLY EXEMPT SMALL QUANTITY GENERATORS OF HAZARDOUS WASTE PROVIDES RELIEF FROM MANY OF THE HAZARDOUS WASTE REGULATIONS	CONSIDER FOR SITES WHERE THE QUANTITY OF HAZARDOUS WASTE GENERATED BY AN ON SITE ACTION WILL BE LESS THAN 100 KG PER MONTH MONTHLY LIMIT FOR ACUTE HAZARDOUS WASTE IS ONE (1) KG	ACTION CHEMICAL
3745 51 06	A.B.C(1)	REQUIREMENTS FOR RECYCLED MATERIALS	DEFINES RECYCLED HAZARDOUS WASTES AND ESTABLISHES SPECIFIC EXEMPTIONS FOR THESE WASTES FROM THE HAZARDOUS WASTE REGULATIONS.	PERTAINS TO ANY SITE AT WHICH RECYCLING OF HAZARDOUS WASTES MAY TAKE PLACE. CONSIDER FOR SITES AT WHICH THE FOLLOWING MATERIALS ARE PRESENT: INDUSTRIAL ETHYL ALCOHOL USED BATTERIES USED OIL SCRAP METAL PETROLEUM PRODUCTS K087 COAL AND COKE TAR SLUDGE	ACTION CHEMICAL
3745 51 07	A.B	RESIDUES OF HAZ WASTES IN EMPTY CONTAINERS	EXEMPTS THE RESIDUES OF HAZARDOUS WASTES FROM EMPTY CONTAINERS FROM THE HAZARDOUS WASTE REGULATIONS. PROVIDES SPECIFIC DEFINITIONS FOR THESE RESIDUES.	PERTAINS TO ANY ALTERNATIVE THAT INCORPORATES STORAGE OF HAZARDOUS WASTE ON-SITE IN CONTAINERS	ACTION
3745 52 11	A D	EVALUATION OF WASTES	ANY PERSON GENERATING A WASTE MUST DETERMINE IF THAT WASTE IS A HAZARDOUS WASTE (EITHER THROUGH LISTING OR BY CHARACTERISTIC)	PERTAINS TO SITES AT WHICH WASTES OF ANY TYPE (BOTH SOLID AND HAZARDOUS) ARE LOCATED	CHEMICAL ACTION
3745 52 20		HAZARDOUS WASTE MANIFEST - GENERAL REQUIREMENTS	REQUIRES A GENERATOR WHO TRANSPORTS OR OFFERS FOR TRANSPORTATION HAZARDOUS WASTE FOR OFF-SITE TREATMENT, STORAGE OR DISPOSAL TO PREPARE A UNIFORM HAZARDOUS WASTE MANIFEST	PERTAINS TO SITES WHERE HAZARDOUS WASTE WILL BE TRANSPORTED OFF SITE FOR TREATMENT, STORAGE OR DISPOSAL	CHEMICAL ACTION
3745 52 22		HAZARDOUS WASTE MANIFEST - NUMBER OF COPIES	SPECIFIES THE NUMBER OF MANIFEST COPIES TO BE PREPARED	PERTAINS TO SITES WHERE HAZARDOUS WASTE WILL BE TRANSPORTED OFF-SITE FOR TREATMENT, STORAGE OR DISPOSAL	CHEMICAL ACTION
3745 52 23		HAZARDOUS WASTE MANIFEST - USE	SPECIFIES PROCEDURES FOR THE USE OF HAZARDOUS WASTE MANIFESTS INCLUDING A REQUIREMENT THAT THEY BE HAND SIGNED BY THE GENERATOR	ERTAINS TO SITES WHERE HAZARDOUS WASTE WILL BE TRANSPORTED OFF-SITE FOR TREATMENT, STORAGE OR DISPOSAL	CHEMICAL ACTION
3745 52 30		HAZARDOUS WASTE PACKAGING	REQUIRES A GENERATOR TO PACKAGE HAZARDOUS WASTE IN ACCORDANCE WITH U.S. DOT REGULATIONS FOR TRANSPORTATION OFF SITE	PERTAINS TO ANY SITE WHERE HAZARDOUS WASTE WILL BE GENERATED BY ON SITE ACTIVITIES AND SHIPPED OFF SITE FOR TREATMENT AND/OR DISPOSAL	CHEMICAL ACTION
3745 52 31		HAZARDOUS WASTE LABELING	REQUIRES PACKAGES OF HAZARDOUS WASTE TO BE LABELLED IN ACCORDANCE WITH U.S DOT REGULATIONS FOR OFF SITE TRANSPORTATION	PERTAINS TO ANY SITE WHERE HAZARDOUS WASTE WILL BE GENERATED BY ON SITE ACTIVITIES AND SHIPPED OFF SITE FOR TREATMENT AND/OR DISPOSAL	CHEMICAL ACTION

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3745.52.32		HAZARDOUS WASTE MARKING	SPECIFIES LANGUAGE FOR MARKING PACKAGES OF HAZARDOUS WASTE PRIOR TO OFF-SITE TRANSPORTATION	PERTAINS TO ANY SITE WHERE HAZARDOUS WASTE WILL BE GENERATED BY ON-SITE ACTIVITIES AND SHIPPED OFF SITE FOR TREATMENT AND/OR DISPOSAL	CHEMICAL ACTION
3745.52.33		HAZARDOUS WASTE PLACARDING	GENERATOR SHALL PLACARD HAZARDOUS WASTE PRIOR TO OFF-SITE TRANSPORTATION	PERTAINS TO ANY SITE WHERE HAZARDOUS WASTE WILL BE GENERATED BY ON-SITE ACTIVITIES AND SHIPPED OFF-SITE FOR TREATMENT AND/OR DISPOSAL.	CHEMICAL ACTION
3745.52.34		ACCUMULATION TIME OF HAZARDOUS WASTE	IDENTIFIES MAXIMUM TIME PERIODS THAT A GENERATOR MAY ACCUMULATE A HAZARDOUS WASTE WITHOUT BEING CONSIDERED AN OPERATOR OF A STORAGE FACILITY ALSO ESTABLISHES STANDARDS FOR MANAGEMENT OF HAZARDOUS WASTES BY GENERATORS	PERTAINS TO A SITE WHERE HAZARDOUS WASTE WILL BE GENERATED AS A RESULT OF THE REMEDIAL ACTIVITIES	CHEMICAL ACTION
3745.54.13	A	GENERAL ANALYSIS OF HAZARDOUS WASTE	PRIOR TO ANY TREATMENT, STORAGE OR DISPOSAL OF HAZARDOUS WASTES, A REPRESENTATIVE SAMPLE OF THE WASTE MUST BE CHEMICALLY AND PHYSICALLY ANALYZED	PERTAINS TO ANY SITE AT WHICH HAZARDOUS IS TO BE TREATED, STORED OR DISPOSED OF (OR HAS BEEN DISPOSED OF).	CHEMICAL
3745.54.14	A, B, C	SECURITY FOR HAZARDOUS WASTE FACILITIES	HAZARDOUS WASTE FACILITIES MUST BE SECURED SO THAT UNAUTHORIZED AND UNKNOWING ENTRY ARE MINIMIZED OR PROHIBITED	PERTAINS TO ANY SITE AT WHICH HAZARDOUS IS TO BE TREATED, STORED OR DISPOSED OF (OR HAS BEEN DISPOSED OF)	ACTION
3745.54.15	A, C	INSPECTION REQUIREMENTS FOR HAZARDOUS WASTE FACILITIES	HAZARDOUS WASTE FACILITIES MUST BE INSPECTED REGULARLY TO DETECT MALFUNCTIONS, DETERIORATIONS, OPERATIONAL ERRORS AND DISCHARGES ANY MALFUNCTIONS OR DETERIORATIONS DETECTED SHALL BE REMEDIATED EXPEDITIOUSLY	PERTAINS TO ANY SITE AT WHICH HAZARDOUS IS TO BE TREATED, STORED OR DISPOSED OF (OR HAS BEEN DISPOSED OF).	ACTION
3745.54.17	A, B, C	REQ FOR IGNITABLE, REACTIVE OR INCOMPATIBLE HAZ WASTES	PRESENTS GENERAL PRECAUTIONS TO BE TAKEN TO PREVENT ACCIDENTAL IGNITION OR REACTION OF IGNITABLE REACTIVE OR INCOMPATIBLE WASTES	PERTAINS TO ANY SITE AT WHICH POTENTIALLY REACTIVE, IGNITABLE OR INCOMPATIBLE WASTES ARE PRESENT	ACTION LOCATION
3745.54.18	A, B, C	LOCATION STANDARDS FOR HAZARDOUS WASTE T/S/D FACILITIES	RESTRICTS THE SITING OF HAZARDOUS WASTE FACILITIES IN AREAS OF SEISMIC ACTIVITY OR FLOODPLAINS	PERTAINS TO ANY SITE AT WHICH HAZARDOUS IS TO BE TREATED, STORED OR DISPOSED OF (OR HAS BEEN DISPOSED OF)	LOCATION
3745.54.31		DESIGN & OPERATION OF HAZARDOUS WASTE FACILITIES	HAZARDOUS WASTE FACILITIES MUST BE DESIGNED, CONSTRUCTED, MAINTAINED AND OPERATED TO MINIMIZE THE POSSIBILITY OF FIRE, EXPLOSION OR UNPLANNED RELEASE OF HAZARDOUS WASTE OR HAZARDOUS CONSTITUENTS TO THE AIR, SOIL OR SURFACE WATER WHICH COULD THREATEN HUMAN HEALTH OR THE ENVIRONMENT	PERTAINS TO ANY SITE AT WHICH HAZARDOUS IS TO BE TREATED, STORED OR DISPOSED OF (OR HAS BEEN DISPOSED OF).	ACTION
3745.54.32	A, B, C, D	REQUIRED EQUIPMENT FOR HAZARDOUS WASTE FACILITIES	ALL HAZARDOUS WASTE FACILITIES MUST BE EQUIPPED WITH EMERGENCY EQUIPMENT, SUCH AS AN ALARM SYSTEM, FIRE CONTROL EQUIPMENT AND A TELEPHONE OR RADIO	PERTAINS TO ANY SITE AT WHICH HAZARDOUS IS TO BE TREATED, STORED OR DISPOSED OF (OR HAS BEEN DISPOSED OF).	ACTION
3745.54.33		TESTING & MAINTENANCE OF EQUIPMENT HAZ WASTE FACILITIES	ALL HAZARDOUS WASTE FACILITIES MUST TEST AND MAINTAIN EMERGENCY EQUIPMENT TO ASSURE PROPER OPERATION	PERTAINS TO ANY SITE AT WHICH HAZARDOUS WASTE IS TO BE TREATED, STORED OR DISPOSED OF (OR HAS BEEN DISPOSED OF).	ACTION
3745.54.34		ACCESS TO COMMUNICATIONS OR ALARM SYSTEM HAZ WASTE FAC	WHENEVER HAZARDOUS WASTE IS BEING HANDLED ALL PERSONNEL INVOLVED SHALL HAVE IMMEDIATE ACCESS TO AN INTERNAL ALARM OR EMERGENCY COMMUNICATION DEVICE	PERTAINS TO ANY SITE AT WHICH HAZARDOUS WASTE IS TO BE TREATED, STORED OR DISPOSED OF (OR HAS BEEN DISPOSED OF).	ACTION

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3745-54-36		REQUIRED AISLE SPACE AT HAZ WASTE FACILITIES	ADEQUATE AISLE SPACE SHALL BE MAINTAINED TO ALLOW UNOBSTRUCTED MOVEMENT OF PERSONNEL, FIRE EQUIPMENT, SPILL CONTROL EQUIPMENT AND DECONTAMINATION EQUIPMENT INTO ANY AREA OF THE FACILITY OPERATION IN THE EVENT OF AN EMERGENCY	PERTAINS TO ANY SITE AT WHICH HAZARDOUS WASTE IS TO BE TREATED, STORED OR DISPOSED OF (OR HAS BEEN DISPOSED OF). CONSIDER FOR SITES WHERE WASTES WILL BE STORED IN CONTAINERS.	ACTION
3745-54-37	A, B	ARRANGEMENTS/ AGREEMENTS WITH LOCAL AUTHORITIES	ARRANGEMENTS OR AGREEMENTS WITH LOCAL AUTHORITIES, SUCH AS POLICE, FIRE DEPARTMENT AND EMERGENCY RESPONSE TEAMS MUST BE MADE. IF LOCAL AUTHORITIES WILL NOT COOPERATE, DOCUMENTATION OF THAT NON-COOPERATION SHOULD BE PROVIDED	PERTAINS TO ANY SITE AT WHICH HAZARDOUS WASTE IS TO BE TREATED, STORED OR DISPOSED OF (OR HAS BEEN DISPOSED OF).	ACTION
3745-54-52	A, F	CONTENT OF CONTINGENCY PLAN; HAZ WASTE FACILITIES	HAZARDOUS WASTE FACILITIES MUST HAVE A CONTINGENCY PLAN THAT ADDRESSES ANY UNPLANNED RELEASE OF HAZARDOUS WASTES OR HAZARDOUS CONSTITUENTS INTO THE AIR, SOIL OR SURFACE WATER. THIS RULE ESTABLISHES THE MINIMUM REQUIRED INFORMATION OF SUCH A PLAN	PERTAINS TO ANY SITE AT WHICH HAZARDOUS WASTE IS TO BE TREATED, STORED OR DISPOSED OF (OR HAS BEEN DISPOSED OF)	ACTION
3745-54-63	A, B	COPIES OF CONTINGENCY PLAN, HAZARDOUS WASTE FACILITIES	COPIES OF THE CONTINGENCY PLAN REQUIRED BY 3745-54-50 MUST BE MAINTAINED AT THE FACILITY AND SUBMITTED TO ALL LOCAL POLICE DEPARTMENTS, FIRE DEPARTMENTS, HOSPITALS LOCAL EMERGENCY RESPONSE TEAMS AND THE OHIO EPA	PERTAINS TO ANY SITE AT WHICH HAZARDOUS WASTE IS TO BE TREATED, STORED OR DISPOSED OF (OR HAS BEEN DISPOSED OF)	ACTION
3745-54-54	A	AMENDMENT OF CONTINGENCY PLAN; HAZ WASTE FACILITIES	THE CONTINGENCY PLAN MUST BE AMENDED IF IT FAILS IN AN EMERGENCY, THE FACILITY CHANGES (IN ITS DESIGN, CONSTRUCTION, MAINTENANCE OR OPERATION), THE LIST OF EMERGENCY COORDINATORS CHANGE OR THE LIST OF EMERGENCY EQUIPMENT	PERTAINS TO ANY SITE AT WHICH HAZARDOUS WASTE IS TO BE TREATED, STORED OR DISPOSED OF (OR HAS BEEN DISPOSED OF).	ACTION
3745-54-55		EMERGENCY COORDINATOR, HAZARDOUS WASTE FACILITIES	AT ALL TIMES THERE SHOULD BE AT LEAST ONE EMPLOYEE EITHER ON THE PREMISES OR ON CALL TO COORDINATE ALL EMERGENCY RESPONSE MEASURES.	PERTAINS TO ANY SITE AT WHICH HAZARDOUS WASTE IS TO BE TREATED, STORED OR DISPOSED OF (OR HAS BEEN DISPOSED OF).	ACTION
3745-54-56	A, I	EMERGENCY PROCEDURES, HAZARDOUS WASTE FACILITIES	SPECIFIES THE PROCEDURES TO BE FOLLOWED IN THE EVENT OF AN EMERGENCY	PERTAINS TO ANY SITE AT WHICH HAZARDOUS WASTE IS TO BE TREATED, STORED OR DISPOSED OF (OR HAS BEEN DISPOSED OF).	ACTION
3745-54-90		GROUND WATER PROTECTION; APPLICABILITY	ESTABLISHES CIRCUMSTANCES UNDER WHICH AN OPERATOR OF A HAZARDOUS WASTE FACILITY MUST IMPLEMENT A GROUND WATER PROTECTION PROGRAM OR A CORRECTIVE ACTION PROGRAM.	PERTAINS TO ALL SITES WITH LAND-BASED HAZARDOUS WASTE UNITS (SURFACE IMPOUNDMENTS, WASTE PILES, LAND TREATMENT UNITS, LANDFILLS). THIS INCLUDES EXISTING LAND-BASED AREAS OF CONTAMINATION.	LOCATION ACTION
3745-54-91	A	REQ GROUND WATER PROGRAMS FOR HAZ WASTE FACILITIES	PRESENTS THE GROUND WATER MONITORING AND RESPONSE PROGRAMS REQUIRED FOR HAZARDOUS WASTE LAND BASED UNITS.	PERTAINS TO ALL SITES WITH LAND-BASED HAZARDOUS WASTE UNITS (SURFACE IMPOUNDMENTS, WASTE PILES, LAND TREATMENT UNITS, LANDFILLS). THIS INCLUDES EXISTING LAND-BASED AREAS OF CONTAMINATION.	ACTION
3745-54-92		GROUND WATER PROTECTION STANDARD, HAZ WASTE FACILITIES	COMPLIANCE MUST BE ATTAINED WITH THE CONDITIONS SPECIFIED IN THE PERMIT TO ENSURE THAT HAZARDOUS CONSTITUENTS (SEE 3745-54-93) DO NOT EXCEED THE PROMULGATED LIMITS (SEE 3745-54-94).	PERTAINS TO ALL SITES WITH LAND-BASED HAZARDOUS WASTE UNITS (SURFACE IMPOUNDMENTS, WASTE PILES, LAND TREATMENT UNITS, LANDFILLS) THIS INCLUDES EXISTING LAND-BASED AREAS OF CONTAMINATION	ACTION CHEMICAL

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3745 54 93	A.B	HAZARDOUS CONSTITUENTS IN GROUND WATER, HAZ WASTE FAC	REQUIRES THAT PERMIT SPECIFY HAZARDOUS CONSTITUENTS TO WHICH THE GROUND WATER PROTECTION STANDARD OF 3745 54 92 APPLIES. HAZARDOUS CONSTITUENTS ARE CONSTITUENTS IDENTIFIED IN THE APPENDIX OF THIS RULE THAT HAVE BEEN DETECTED IN GROUND WATER IN THE UPPERMOST AQUIFER UNDERLYING THE UNIT(S) AND ARE REASONABLY EXPECTED TO BE IN OR DERIVED FROM WASTE CONTAINED IN THE UNIT(S).	PERTAINS TO ALL SITES WITH LAND BASED HAZARDOUS WASTE UNITS (SURFACE IMPOUNDMENTS, WASTE PILES, LAND TREATMENT UNITS, LANDFILLS) THIS INCLUDES EXISTING LAND BASED AREAS OF CONTAMINATION.	CHEMICAL
3745 54 94	A.B	CONCENTRATION LIMITS FOR GROUND WATER, HAZ WASTE FAC	PRESENTS THE METHODOLOGY FOR DETERMINING CONCENTRATION LIMITS AND ALTERNATIVE CONCENTRATION LIMITS	PERTAINS TO ALL SITES WITH LAND BASED HAZARDOUS WASTE UNITS (SURFACE IMPOUNDMENTS, WASTE PILES, LAND TREATMENT UNITS, LANDFILLS) THIS INCLUDES EXISTING LAND BASED AREAS OF CONTAMINATION	CHEMICAL
3745 54 95	A.B	POINT OF COMPLIANCE FOR GROUND WATER, HAZ WASTE FACIL	ESTABLISHES POINT OF COMPLIANCE AT VERTICAL SURFACE LOCATED AT THE HYDRAULICALLY DOWNGRADIENT LIMIT OF THE WASTE MANAGEMENT AREA THAT EXTENDS DOWN INTO THE UPPERMOST AQUIFER UNDERLYING THE UNIT(S).	PERTAINS TO ALL SITES WITH LAND BASED HAZARDOUS WASTE UNITS (SURFACE IMPOUNDMENTS, WASTE PILES, LAND TREATMENT UNITS, LANDFILLS) THIS INCLUDES EXISTING LAND BASED AREAS OF CONTAMINATION	ACTION CHEMICAL
3745 54 96	A.B.C	COMPLIANCE PERIOD FOR GROUND WATER, HAZ WASTE FACIL	A COMPLIANCE PERIOD DURING WHICH THE GROUND WATER PROTECTION STANDARDS APPLY WILL BE SPECIFIED IN THE PERMIT RULE. RULE REQUIRES THAT THE COMPLIANCE PERIOD FOR A FACILITY UNDERGOING A CORRECTIVE ACTION PROGRAM WILL EXTEND UNTIL IT CAN BE DEMONSTRATED THAT THE GROUND WATER PROTECTION STANDARD OF OAC 3745 54 92 HAS NOT BEEN EXCEEDED FOR A PERIOD OF THREE CONSECUTIVE YEARS	PERTAINS TO ALL SITES WITH LAND BASED HAZARDOUS WASTE UNITS (SURFACE IMPOUNDMENTS, WASTE PILES, LAND TREATMENT UNITS, LANDFILLS) THIS INCLUDES EXISTING LAND BASED AREAS OF CONTAMINATION	ACTION CHEMICAL
3745 54 97	A.H	GEN GROUND WATER MONITORING REQUIREMENTS, HAZ WASTE FAC	PRESENTS GENERAL GROUND WATER MONITORING PROGRAM REQUIREMENTS. INCLUDES NUMBER, LOCATION AND DEPTH OF WELLS, CASING REQUIREMENTS, SAMPLING AND ANALYSIS PROCEDURES, ETC.	PERTAINS TO ALL SITES WITH LAND BASED HAZARDOUS WASTE UNITS (SURFACE IMPOUNDMENTS, WASTE PILES, LAND TREATMENT UNITS, LANDFILLS) THIS INCLUDES EXISTING LAND BASED AREAS OF CONTAMINATION.	ACTION CHEMICAL
3745 54 98	A.I	GROUND WATER DETECTION MONITORING PROG, HAZ WASTE FAC	PRESENTS REQUIREMENTS OF GROUND WATER DETECTION PROGRAM	PERTAINS TO ALL SITES WITH LAND BASED HAZARDOUS WASTE UNITS (SURFACE IMPOUNDMENTS, WASTE PILES, LAND TREATMENT UNITS, LANDFILLS) AT WHICH HAZARDOUS CONSTITUENTS HAVE NOT BEEN DETECTED IN THE GROUND WATER. THIS INCLUDES EXISTING LAND BASED AREAS OF CONTAMINATION.	ACTION CHEMICAL
3745 54 99	A.J	GROUND WATER COMPLIANCE MONITORING PROG, HAZ WASTE FAC	PRESENTS REQUIREMENTS OF GROUND WATER COMPLIANCE MONITORING PROGRAM.	PERTAINS TO ALL SITES WITH LAND BASED HAZARDOUS WASTE UNITS (SURFACE IMPOUNDMENTS, WASTE PILES, LAND TREATMENT UNITS, LANDFILLS) AT WHICH HAZARDOUS CONSTITUENTS HAVE BEEN DETECTED. THIS INCLUDES EXISTING LAND BASED AREAS OF CONTAMINATION.	ACTION CHEMICAL
3745 55 01	A.F	GROUND WATER CORRECTIVE ACTION PROGRAM, HAZ WASTE FAC	PRESENTS THE REQUIREMENTS OF A GROUND WATER CORRECTIVE ACTION PROGRAM THAT PREVENTS HAZARDOUS CONSTITUENTS FROM EXCEEDING THEIR RESPECTIVE CONCENTRATION LIMITS AT THE COMPLIANCE POINT BY EITHER REMOVAL OR TREATMENT OF THESE HAZARDOUS CONSTITUENTS.	PERTAINS TO ALL SITES WITH LAND BASED HAZARDOUS WASTE UNITS (SURFACE IMPOUNDMENTS, WASTE PILES, LAND TREATMENT UNITS, LANDFILLS) AT WHICH HAZARDOUS CONSTITUENTS HAVE BEEN DETECTED. THIS INCLUDES EXISTING LAND BASED AREAS OF CONTAMINATION.	ACTION CHEMICAL

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3745.55-011	A.C	CORRECTIVE ACTION FOR WASTE MANAGEMENT UNITS	REQUIRES AN APPLICANT FOR A HAZARDOUS WASTE PERMIT TO INSTITUTE CORRECTIVE ACTION FOR ALL RELEASES OF HAZARDOUS WASTE OR CONSTITUENTS FROM ANY WASTE MANAGEMENT UNIT, REGARDLESS OF THE TIME AT WHICH WASTE WAS PLACED IN SUCH UNIT.	PERTAINS TO ALL SITES WITH LAND-BASED HAZARDOUS WASTE UNITS (SURFACE IMPOUNDMENTS, WASTE PILES, LAND TREATMENT UNITS, LANDFILLS) AT WHICH HAZARDOUS CONSTITUENTS HAVE BEEN DETECTED. THIS INCLUDES EXISTING LAND BASED AREAS OF CONTAMINATION.	ACTION
3745 55 11	A, B, C	GENERAL CLOSURE PERFORMANCE STANDARD: HAZ WASTE FACIL	REQUIRES THAT ALL HAZARDOUS WASTE FACILITIES BE CLOSED IN A MANNER THAT MINIMIZES THE NEED FOR FURTHER MAINTENANCE, CONTROLS, MINIMIZES, ELIMINATES OR PREVENTS POST-CLOSURE ESCAPE OF HAZARDOUS WASTE, HAZARDOUS CONSTITUENTS, LEACHATE, CONTAMINATED RUN-OFF OR HAZARDOUS WASTE DECOMPOSITION PRODUCTS TO THE GROUND OR SURFACE WATER OR THE ATMOSPHERE.	PERTAINS TO ANY SITE AT WHICH HAZARDOUS WASTE IS TO BE TREATED, STORED OR DISPOSED OF (OR HAS BEEN TREATED, STORED OR DISPOSED OF).	ACTION
3745 55 12	B	CONTENT OF CLOSURE PLAN; HAZ WASTE FACILITIES	SPECIFIES THE MINIMUM INFORMATION REQUIRED IN A CLOSURE PLAN FOR OHIO EPA TO DETERMINE THE ADEQUACY OF THE PLAN	SUBSTANTIVE REQUIREMENTS PERTAIN TO ANY SITE AT WHICH HAZARDOUS WASTE IS TO BE TREATED, STORED OR DISPOSED OF (OR HAS BEEN TREATED, STORED OR DISPOSED OF).	ACTION
3745.55 14		DISPOSAL/ DECON OF EQUIPMENT, STRUCTURES & SOILS	REQUIRES THAT ALL CONTAMINATED EQUIPMENT, STRUCTURES AND SOILS BE PROPERLY DISPOSED OF OR DECONTAMINATED. REMOVAL OF HAZARDOUS WASTES OR CONSTITUENTS FROM A UNIT MAY CONSTITUTE GENERATION OF HAZARDOUS WASTES	PERTAINS TO ANY SITE AT WHICH HAZARDOUS WASTE IS TO BE TREATED, STORED OR DISPOSED OF (OR HAS BEEN TREATED, STORED OR DISPOSED OF).	ACTION
3745 55 17	B	POST-CLOSURE CARE AND USE OF PROPERTY	SPECIFIES THE POST-CLOSURE CARE REQUIREMENTS, INCLUDING MAINTENANCE, MONITORING AND POST CLOSURE USE OF PROPERTY	PERTAINS TO ALL SITES WITH LAND-BASED HAZARDOUS WASTE UNITS (LANDFILLS AND SURFACE IMPOUNDMENTS, WASTE PILES, LAND TREATMENT UNITS AND TANKS THAT MEET REQUIREMENTS OF LANDFILLS AFTER CLOSURE). THIS INCLUDES EXISTING LAND-BASED AREAS OF CONTAMINATION.	ACTION
3745 55 18	B	POST CLOSURE PLAN	PRESENTS THE INFORMATION NECESSARY FOR OHIO EPA TO DETERMINE THE ADEQUACY OF A POST CLOSURE PLAN	PERTAINS TO ALL SITES WITH LAND BASED HAZARDOUS WASTE UNITS (LANDFILLS AND SURFACE IMPOUNDMENTS, WASTE PILES, LAND TREATMENT UNITS AND TANKS THAT MEET REQUIREMENTS OF LANDFILLS AFTER CLOSURE) THIS INCLUDES EXISTING LAND-BASED AREAS OF CONTAMINATION	ACTION
3745 55 19	B	NOTICE TO LOCAL LAND AUTHORITY	REQUIRES THAT A RECORD OF THE TYPE, LOCATION AND QUANTITY OF HAZARDOUS WASTES DISPOSED OF IN EACH UNIT BE SUBMITTED TO THE LOCAL LAND AUTHORITY AND THE DIRECTOR OF THE OHIO EPA. ALSO REQUIRES THAT A NOTATION TO THE DEED TO THE FACILITY PROPERTY BE MADE INDICATING THAT THE LAND WAS USED TO MANAGE HAZARDOUS WASTES AND THAT CERTAIN USE RESTRICTIONS MAY APPLY TO THE PROPERTY	PERTAINS TO ALL SITES WITH LAND-BASED HAZARDOUS WASTE UNITS (LANDFILLS AND SURFACE IMPOUNDMENTS, WASTE PILES, LAND TREATMENT UNITS AND TANKS THAT MEET REQUIREMENTS OF LANDFILLS AFTER CLOSURE). THIS INCLUDES EXISTING LAND-BASED AREAS OF CONTAMINATION.	ACTION
3745 55 71		CONDITION OF CONTAINERS	CONTAINERS HOLDING HAZARDOUS WASTE MUST BE MAINTAINED IN GOOD CONDITION (NO RUST OR STRUCTURAL DEFECTS)	PERTAINS TO ANY SITE AT WHICH HAZARDOUS WASTE WILL BE STORED IN CONTAINERS.	ACTION
3745 55 72		COMPATIBILITY OF WASTE WITH CONTAINERS	HAZARDOUS WASTES PLACED IN CONTAINER MUST NOT REACT WITH THE CONTAINER MATERIAL OR LINER MATERIAL	PERTAINS TO ANY SITE AT WHICH HAZARDOUS WASTE WILL BE STORED IN CONTAINERS	ACTION

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3745 55 73		MANAGEMENT OF CONTAINERS	CONTAINERS HOLDING HAZARDOUS WASTE MUST BE CLOSED (EXCEPT TO ADD OR REMOVE WASTE) AND MUST NOT BE HANDLED IN A MANNER THAT MAY RUPTURE THE CONTAINER OR CAUSE IT TO LEAK	PERTAINS TO ANY SITE AT WHICH HAZARDOUS WASTE WILL BE STORED IN CONTAINERS.	ACTION
3745 55 74		CONTAINER INSPECTIONS	REQUIRES AT LEAST WEEKLY INSPECTIONS OF CONTAINER STORAGE AREAS.	PERTAINS TO ANY SITE AT WHICH HAZARDOUS WASTE WILL BE STORED IN CONTAINERS.	ACTION
3745 55 75	A, B, C, D	CONTAINER STORAGE AREA CONTAINMENT SYSTEM	REQUIRES THAT CONTAINER STORAGE AREAS HAVE A CONTAINMENT SYSTEM AND SPECIFIES THE MINIMUM REQUIREMENTS OF SUCH A SYSTEM.	PERTAINS TO ANY SITE AT WHICH HAZARDOUS WASTE WILL BE STORED IN CONTAINERS.	ACTION
3745 55 76		CONTAINER REQUIREMENTS FOR IGNITABLE/REACTIVE WASTES	PRESENTS GENERAL PRECAUTIONS TO BE TAKEN TO PREVENT ACCIDENTAL IGNITION OR REACTION OF IGNITABLE OR REACTIVE WASTES THAT WILL BE STORED IN CONTAINERS.	PERTAINS TO ANY SITE AT WHICH POTENTIALLY REACTIVE OR IGNITABLE WASTES THAT ARE STORED, OR ARE TO BE STORED, IN CONTAINERS.	ACTION CHEMICAL
3745 55 77	A, B, C	CONTAINER REQUIREMENTS FOR INCOMPATIBLE WASTES	PRESENTS GENERAL PRECAUTIONS TO BE TAKEN WHEN DEALING WITH INCOMPATIBLE WASTES.	PERTAINS TO ANY SITE AT WHICH POTENTIALLY INCOMPATIBLE WASTES ARE PRESENT	ACTION CHEMICAL
3745 55 78		CONTAINER CLOSURE REQUIREMENTS	SPECIFIES CLOSURE REQUIREMENTS FOR CONTAINERS AND CONTAINMENT SYSTEM.	PERTAINS TO ANY SITE AT WHICH HAZARDOUS WASTE WILL BE STORED IN CONTAINERS	ACTION
3745 55 91	A, B, D	ASSESSMENT OF EXISTING TANK SYSTEMS INTEGRITY	REQUIRES THAT EACH EXISTING TANK USED TO STORE OR TREAT HAZARDOUS WASTE THAT DOES NOT HAVE SECONDARY CONTAINMENT BE TESTED TO ASSURE TANK INTEGRITY	PERTAINS TO ANY SITE WHICH HAS EXISTING HAZARDOUS WASTE TREATMENT OR STORAGE TANKS THAT LACK SECONDARY CONTAINMENT	ACTION
3745 55 92	A, G	DESIGN & INSTALLATION OF NEW TANK SYSTEMS OR COMPONENTS	REQUIRES A SECONDARY CONTAINMENT SYSTEM FOR TANKS AND ASSESSMENT TO DETERMINE TANK INTEGRITY	PERTAINS TO ANY SITE AT WHICH HAZARDOUS WASTE WILL BE EITHER STORED OR TREATED IN TANKS	ACTION
3745 55 93	A, G, I	CONTAINMENT AND DETECTION OF RELEASES FOR TANK SYSTEMS	REQUIRES SECONDARY CONTAINMENT AND LEAK DETECTION SYSTEMS FOR TANKS	PERTAINS TO ANY SITE AT WHICH HAZARDOUS WASTE WILL BE EITHER STORED OR TREATED IN TANKS.	ACTION
3745 55 94	A, B, C	GENERAL OPERATING REQUIREMENTS FOR TANK SYSTEMS	SPECIFIES GENERAL OPERATING REQUIREMENTS FOR TANK SYSTEMS	PERTAINS TO ANY SITE AT WHICH HAZARDOUS WASTE WILL BE EITHER STORED OR TREATED IN TANKS	ACTION
3745 55 95	A, D	INSPECTIONS OF TANK SYSTEMS	REQUIRES INSPECTIONS AT LEAST ONCE EACH OPERATING DAY	PERTAINS TO ANY SITE AT WHICH HAZARDOUS WASTE WILL BE EITHER STORED OR TREATED IN TANKS	ACTION
3745 55 96	A, B, C, E	RESPONSE TO LEAKS OR SPILLS OF TANK SYSTEMS	REQUIRES THAT UNFIT TANKS BE REMOVED FROM USE AND FURTHER RELEASES BE PREVENTED	PERTAINS TO ANY SITE AT WHICH HAZARDOUS WASTE WILL BE EITHER STORED OR TREATED IN TANKS	ACTION
3745 55 97	A, B	CLOSURE AND POST CLOSURE CARE FOR TANK SYSTEMS	SPECIFIES CLOSURE AND POST-CLOSURE REQUIREMENTS FOR TANK SYSTEMS	PERTAINS TO ANY SITE AT WHICH HAZARDOUS WASTE WILL BE EITHER STORED OR TREATED IN TANKS	ACTION

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3745.55-98		TANK REQUIREMENTS FOR IGNITABLE/REACTIVE WASTES	PRESENTS GENERAL PRECAUTIONS TO BE TAKEN TO PREVENT ACCIDENTAL IGNITION OR REACTION OF IGNITABLE OR REACTIVE WASTES THAT ARE TREATED OR STORED IN TANKS	PERTAINS TO ANY SITE AT WHICH POTENTIALLY REACTIVE OR IGNITABLE WASTES ARE STORED OR TREATED (OR TO BE STORED OR TREATED) IN EXISTING TANKS.	ACTION
3745.55-99	A, B	TANK REQUIREMENTS FOR INCOMPATIBLE WASTES	PRESENTS GENERAL PRECAUTIONS TO BE TAKEN WHEN DEALING WITH POTENTIALLY INCOMPATIBLE WASTES THAT ARE STORED OR TREATED IN TANKS	PERTAINS TO ANY SITE AT WHICH POTENTIALLY INCOMPATIBLE WASTES ARE STORED OR TREATED (OR TO BE STORED OR TREATED) IN TANKS.	ACTION
3745.56-21	A, G	DESIGN & OPERATING REQUIREMENTS ; SURFACE IMPOUNDMENTS	PRESENTS DESIGN AND OPERATING CRITERIA FOR SURFACE IMPOUNDMENTS	PERTAINS TO ANY SITE AT WHICH HAZARDOUS WASTE WILL BE TREATED OR STORED IN SURFACE IMPOUNDMENTS (LAGOONS). PERTAINS TO SITES WHICH HAVE SURFACE IMPOUNDMENTS THAT WILL NOT BE (OR HAVE NOT BEEN) CLEAN CLOSED.	ACTION
3745.56-26	A, B, C	MONITORING & INSPECTION OF SURFACE IMPOUNDMENTS	REQUIRES INSPECTION OF LINERS DURING CONSTRUCTION ALSO REQUIRES WEEKLY AND AFTER STORM INSPECTIONS	PERTAINS TO ANY SITE AT WHICH HAZARDOUS WASTE WILL BE TREATED OR STORED IN SURFACE IMPOUNDMENTS (LAGOONS). PERTAINS TO SITES WHICH HAVE SURFACE IMPOUNDMENTS THAT WILL NOT BE (OR HAVE NOT BEEN) CLEAN CLOSED.	ACTION
3745.56-27	A, E	EMERGENCY REPAIRS & CONTINGENCY PLANS ; SURFACE IMPOUND	SPECIFIES WHEN AND HOW SURFACE IMPOUNDMENTS SHOULD BE REMOVED FROM SERVICE FOR REPAIRS.	PERTAINS TO ANY SITE AT WHICH HAZARDOUS WASTE WILL BE TREATED OR STORED IN SURFACE IMPOUNDMENTS (LAGOONS). PERTAINS TO SITES WHICH HAVE SURFACE IMPOUNDMENTS THAT WILL NOT BE (OR HAVE NOT BEEN) CLEAN CLOSED.	ACTION
3745.56-28	A, B, C	CLOSURE & POST-CLOSURE OF SURFACE IMPOUNDMENTS	PROVIDES CLOSURE AND POST-CLOSURE REQUIREMENTS FOR SURFACE IMPOUNDMENTS.	PERTAINS TO ANY SITE AT WHICH HAZARDOUS WASTE WILL BE TREATED OR STORED IN SURFACE IMPOUNDMENTS (LAGOONS). PERTAINS TO SITES WHICH HAVE SURFACE IMPOUNDMENTS THAT WILL NOT BE (OR HAVE NOT BEEN) CLEAN CLOSED.	ACTION
3745.56-29	A, B	SURFACE IMP. REQUIREMENTS FOR IGNITABLE/REACTIVE WASTES	PRESENTS GENERAL PRECAUTIONS TO BE TAKEN WHEN DEALING WITH POTENTIALLY IGNITABLE OR REACTIVE WASTES THAT ARE STORED OR TREATED IN SURFACE IMPOUNDMENTS	PERTAINS TO ANY SITE AT WHICH POTENTIALLY IGNITABLE OR REACTIVE HAZARDOUS WASTE WILL BE TREATED OR STORED IN SURFACE IMPOUNDMENTS (LAGOONS). PERTAINS TO SITES WHICH HAVE SURFACE IMPOUNDMENTS THAT WILL NOT BE (OR HAVE NOT BEEN) CLEAN CLOSED.	ACTION CHEMICAL
3745.56-30		SURFACE IMPOUND REQUIREMENTS FOR INCOMPATIBLE WASTES	PRESENTS GENERAL PRECAUTIONS TO BE TAKEN WHEN DEALING WITH POTENTIALLY INCOMPATIBLE WASTES THAT ARE STORED OR TREATED IN SURFACE IMPOUNDMENTS	PERTAINS TO ANY SITE AT WHICH POTENTIALLY INCOMPATIBLE HAZARDOUS WASTE WILL BE TREATED OR STORED IN SURFACE IMPOUNDMENTS (LAGOONS). PERTAINS TO SITES WHICH HAVE SURFACE IMPOUNDMENTS THAT WILL NOT BE (OR HAVE NOT BEEN) CLEAN CLOSED.	ACTION CHEMICAL
3745.56-31	A	CONSTRUCTION INSPECTIONS OF SURFACE IMPOUNDMENTS	ALLOWS OHIO EPA OPPORTUNITY TO INSPECT SURFACE IMPOUNDMENTS DURING CONSTRUCTION AND INSTALLATION	PERTAINS TO ANY SITE AT WHICH HAZARDOUS WASTE WILL BE TREATED OR STORED IN SURFACE IMPOUNDMENTS (LAGOONS). PERTAINS TO SITES WHICH HAVE SURFACE IMPOUNDMENTS THAT WILL NOT BE (OR HAVE NOT BEEN) CLEAN CLOSED	ACTION
3745.56-51	A, F	DESIGN & OPERATING REQUIREMENTS FOR WASTE PILES	SPECIFIES THE DESIGN AND OPERATION REQUIREMENTS FOR WASTE PILES INCLUDES LINER SYSTEM, LEACHATE COLLECTION AND REMOVAL SYSTEM, WIND DISPERSAL PREVENTION AND RUN-ON/RUN OFF CONTROL	PERTAINS TO ANY SITE AT WHICH HAZARDOUS WASTE WILL BE EITHER STORED OR TREATED IN WASTE PILES	ACTION

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3745 56 54	A.B	MONITORING & INSPECTION OF WASTE PILES	WASTE PILES MUST BE MONITORED DURING CONSTRUCTION OR INSTALLATION AND OPERATION	PERTAINS TO ANY SITE AT WHICH HAZARDOUS WASTE WILL BE EITHER STORED OR TREATED IN WASTE PILES	ACTION
3745 56 56	A.B	WASTE PILE REQUIREMENTS FOR IGNITABLE/ REACTIVE WASTES	PRESENTS GENERAL PRECAUTIONS TO BE TAKEN WHEN DEALING WITH POTENTIALLY IGNITABLE OR REACTIVE HAZARDOUS WASTES THAT ARE STORED OR TREATED IN WASTE PILES	PERTAINS TO ANY SITE AT WHICH POTENTIALLY IGNITABLE OR REACTIVE HAZARDOUS WASTE WILL BE EITHER STORED OR TREATED IN WASTE PILES.	ACTION CHEMICAL
3745 56 57	A.B.C	WASTE PILE REQUIREMENTS FOR INCOMPATIBLE WASTES	PRESENTS GENERAL PRECAUTIONS TO BE TAKEN WHEN DEALING WITH POTENTIALLY INCOMPATIBLE WASTES THAT ARE STORED OR TREATED IN WASTE PILES.	PERTAINS TO ANY SITE AT WHICH POTENTIALLY INCOMPATIBLE HAZARDOUS WASTE WILL BE EITHER STORED OR TREATED IN WASTE PILES	ACTION CHEMICAL
3745 56 58	A.B.C	CLOSURE & POST-CLOSURE CARE FOR WASTE PILES	SPECIFIES CLOSURE AND POST-CLOSURE CARE REQUIREMENTS FOR WASTE PILES	PERTAINS TO ANY SITE AT WHICH HAZARDOUS WASTE WILL BE EITHER STORED OR TREATED IN WASTE PILES.	ACTION
3745 56 59	A	CONSTRUCTION INSPECTIONS FOR WASTE PILES	ALLOWS OHIO EPA THE OPPORTUNITY TO INSPECT WASTE PILES DURING CONSTRUCTION	PERTAINS TO ANY SITE AT WHICH HAZARDOUS WASTE WILL BE EITHER STORED OR TREATED IN WASTE PILES	ACTION
3745 57 01	A.D	ENVIRONMENTAL PERFORMANCE STANDARDS, LAND BASED UNITS	SPECIFIES LOCATION, DESIGN, CONSTRUCTION, OPERATION, MAINTENANCE AND CLOSURE REQUIREMENTS FOR LANDFILLS, WASTE PILES, SURFACE IMPOUNDMENTS AND UNDERGROUND INJECTION WELLS	PERTAINS TO ALL SITES THAT EITHER HAVE OR WILL HAVE AT LEAST ONE OF THE FOLLOWING UNITS ON SITE LANDFILLS, WASTE PILES, SURFACE IMPOUNDMENTS, LAND TREATMENT FACILITIES AND UNDERGROUND INJECTION WELLS (THIS INCLUDES EXISTING LAND-BASED AREAS OF CONTAMINATION).	ACTION
3745 57 03	A.I	LANDFILL DESIGN AND OPERATING REQUIREMENTS	PRESENTS DESIGN AND OPERATING REQUIREMENTS FOR LANDFILLS INCLUDES LINER, LEACHATE COLLECTION AND REMOVAL, RUN ON/RUN OFF CONTROL, ETC	PERTAINS TO ALL SITES AT WHICH A HAZARDOUS WASTE LANDFILL WILL EITHER BE LOCATED OR AN EXISTING LANDFILL WILL BE EXPANDED. THIS RULE ALSO PERTAINS TO EXISTING LAND BASED AREAS OF CONTAMINATION	ACTION
3745 57 05	A.B	MONITORING AND INSPECTIONS OF LANDFILLS	REQUIRES INSPECTION OF LANDFILLS DURING CONSTRUCTION OR INSTALLATION AND OPERATION	PERTAINS TO ALL SITES AT WHICH A HAZARDOUS WASTE LANDFILL WILL EITHER BE LOCATED OR AN EXISTING LANDFILL WILL BE EXPANDED THIS RULE PERTAINS TO EXISTING LAND-BASED AREAS OF CONTAMINATION	ACTION
3745 57 10	A.B	LANDFILL CLOSURE AND POST CLOSURE CARE	SPECIFIES CLOSURE AND POST CLOSURE REQUIREMENTS FOR HAZARDOUS WASTE LANDFILLS INCLUDES FINAL COVER AND MAINTENANCE	PERTAINS TO ALL SITES AT WHICH A HAZARDOUS WASTE LANDFILL WILL EITHER BE LOCATED OR AN EXISTING LANDFILL WILL BE EXPANDED THIS RULE PERTAINS TO EXISTING LAND BASED AREAS OF CONTAMINATION.	ACTION
3745 57 12	A.B	LANDFILL REQUIREMENTS FOR IGNITABLE/REACTIVE WASTES	PROHIBITS THE DISPOSAL OF IGNITABLE OR REACTIVE WASTE IN A LANDFILL, UNLESS THE WASTE IS TREATED RENDERED OR MIXED SO THAT THE RESULTANT MATERIAL NO LONGER MEETS THE DEFINITION OF IGNITABLE OR REACTIVE WASTE	PERTAINS TO ALL SITES AT WHICH POTENTIALLY IGNITABLE OR REACTIVE HAZARDOUS WASTE MAY BE LANDFILLED.	ACTION CHEMICAL
3745 57 13		LANDFILL REQUIREMENTS FOR INCOMPATIBLE WASTES	PROHIBITS THE DISPOSAL OF INCOMPATIBLE WASTE IN THE SAME CELL OF A LANDFILL	PERTAINS TO ALL SITES AT WHICH POTENTIALLY INCOMPATIBLE HAZARDOUS WASTE MAY BE LANDFILLED	ACTION CHEMICAL

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3745 57 14	A.D	LANDFILL REQUIREMENTS FOR BULK & CONTAINERIZED LIQUIDS	THE PLACEMENT OF BULK OR NON-CONTAINERIZED LIQUID HAZARDOUS WASTE OR HAZARDOUS WASTES CONTAINING FREE LIQUIDS (WHETHER OR NOT ABSORBANTS HAVE BEEN ADDED) IN ANY LANDFILL IS PROHIBITED	PERTAINS TO ALL SITES AT WHICH A LIQUID HAZARDOUS WASTE OR HAZARDOUS WASTE CONTAINING FREE LIQUIDS ARE CONSIDERED FOR LANDFILLING	ACTION
3745 57 15	A.B	LANDFILL REQUIREMENTS FOR CONTAINERS	UNLESS THEY ARE VERY SMALL, CONTAINERS MUST EITHER BE AT LEAST 90% FULL WHEN PLACED IN THE LANDFILL OR CRUSHED/SHREDDED PRIOR TO PLACEMENT IN THE LANDFILL	PERTAINS TO ALL SITES AT WHICH A HAZARDOUS WASTE LANDFILL WILL EITHER BE LOCATED OR AN EXISTING LANDFILL WILL BE EXPANDED AND CONTAINERS ARE TO BE DISPOSED OF IN THE LANDFILL.	ACTION
3745 57 16	A.E	DISPOSAL OF SMALL CONTAINERS OF HAZ WASTES IN OVERPACKS	LAB PACKS CONTAINING HAZARDOUS WASTE MAY BE PLACED IN A LANDFILL IF CERTAIN REQUIREMENTS ARE MET	PERTAINS TO ALL SITES AT WHICH A HAZARDOUS WASTE LANDFILL WILL EITHER BE LOCATED OR AN EXISTING LANDFILL WILL BE EXPANDED AND LAB PACKS ARE TO BE PLACED IN THE LANDFILL.	ACTION
3745 57 17	A	LANDFILL CONSTRUCTION INSPECTIONS	ALLOWS OHIO EPA OPPORTUNITY TO INSPECT LANDFILL DURING CONSTRUCTION	PERTAINS TO ALL SITES AT WHICH A HAZARDOUS WASTE LANDFILL WILL EITHER BE LOCATED OR AN EXISTING LANDFILL WILL BE EXPANDED. THIS RULE PERTAINS TO EXISTING LAND-BASED AREAS OF CONTAMINATION.	ACTION
3745 57 18	A.B	SPECIAL REQUIREMENTS FOR "F" WASTES IN LANDFILLS	PROHIBITS THE PLACEMENT OF HAZARDOUS WASTES F020, F021, F022, F023, F026 AND F027 IN LANDFILLS	PERTAINS TO ALL SITES AT WHICH A HAZARDOUS WASTE LANDFILL WILL EITHER BE LOCATED OR AN EXISTING LANDFILL WILL BE EXPANDED AND F-WASTES ARE BEING CONSIDERED FOR LANDFILLING	ACTION CHEMICAL
3745 57 41	A.B	WASTE ANALYSIS FOR INCINERATORS	REQUIRES WASTE ANALYSIS BE PERFORMED FOR TRIAL BURN AND FOR NORMAL OPERATION OF INCINERATOR	PERTAINS TO ANY ALTERNATIVE THAT WILL INCORPORATE INCINERATION OF HAZARDOUS WASTES.	CHEMICAL ACTION
3745 57 42	A.B.C	PRINCIPAL ORGANIC HAZARDOUS CONSTITUENTS, INCINERATORS	ESTABLISHES METHOD BY WHICH POHCS WILL BE SPECIFIED	PERTAINS TO ANY ALTERNATIVE THAT WILL INCORPORATE INCINERATION OF HAZARDOUS WASTES	CHEMICAL ACTION
3745 57 43	A.B.C	PERFORMANCE STANDARDS FOR INCINERATORS	SPECIFIES PERFORMANCE STANDARDS THAT ALL INCINERATORS MUST MEET (DESTRUCTION REMOVAL EFFICIENCIES, HCL EMISSIONS, PARTICULATE EMISSIONS)	PERTAINS TO ANY ALTERNATIVE THAT WILL INCORPORATE INCINERATION OF HAZARDOUS WASTES	CHEMICAL ACTION
3745 57 44	C	INCINERATOR TRIAL BURNS - ALTERNATIVE DATA	REQUIRES TRIAL BURN TO DETERMINE FINAL OPERATING CONDITIONS.	PERTAINS TO ANY ALTERNATIVE THAT WILL INCORPORATE INCINERATION OF HAZARDOUS WASTES	ACTION CHEMICAL
3745 57 45	A.F	INCINERATOR OPERATING REQUIREMENTS	SPECIFIES GENERAL OPERATING REQUIREMENTS FOR ALL INCINERATORS	PERTAINS TO ANY ALTERNATIVE THAT WILL INCORPORATE INCINERATION OF HAZARDOUS WASTES	ACTION
3745 57 47	A.B.C	MONITORING AND INSPECTION OF INCINERATORS	REQUIRES THE MONITORING OF CERTAIN PARAMETERS ON A CONTINUOUS BASIS AND INSPECTIONS OF EQUIPMENT	PERTAINS TO ANY ALTERNATIVE THAT WILL INCORPORATE INCINERATION OF HAZARDOUS WASTES	ACTION CHEMICAL
3745 57 51		CLOSURE OF INCINERATORS	REQUIRES THAT ALL HAZARDOUS WASTE AND HAZARDOUS WASTE RESIDUES BE REMOVED FROM THE INCINERATOR SITE	PERTAINS TO ANY ALTERNATIVE THAT WILL INCORPORATE INCINERATION OF HAZARDOUS WASTES	ACTION

ADMINIS. CODE SECTION	PERTINENT PARAGRAPH	TITLE OR SUBJECT OF REGULATION	DESCRIPTION OF REGULATION	APPLICATION OF REGULATION	ARAR TYPE
3745 57 91	A, B, C	ENVIRONMENTAL PERFORMANCE STANDARDS FOR MISC UNITS	ESTABLISHES LOCATION, DESIGN, CONSTRUCTION, OPERATION, MAINTENANCE AND CLOSURE REQUIREMENTS FOR MISCELLANEOUS UNITS USED TO TREAT, STORE OR DISPOSE OF HAZARDOUS WASTES	PERTAINS TO ANY ALTERNATIVE THAT INCORPORATES TREATMENT, STORAGE OR DISPOSAL OF HAZARDOUS WASTES IN MISCELLANEOUS UNITS	ACTION CHEMICAL
3745 57 92		MONITORING, INSPECTING, ANALYZING, FOR MISC UNITS	REQUIRES THAT MONITORING, ANALYSIS, INSPECTION, RESPONSE, REPORTING AND CORRECTIVE ACTION BE CONDUCTED AS NECESSARY AT MISCELLANEOUS UNITS TO ASSURE THAT HUMAN HEALTH AND THE ENVIRONMENT ARE PROTECTED	PERTAINS TO ANY ALTERNATIVE THAT INCORPORATES TREATMENT, STORAGE OR DISPOSAL OF HAZARDOUS WASTES IN MISCELLANEOUS UNITS	ACTION
3745 57 93		POST-CLOSURE CARE FOR MISC DISPOSAL UNITS	REQUIRES POST-CLOSURE CARE OF MISCELLANEOUS UNITS THAT ARE DISPOSAL UNITS AND OF TREATMENT OR STORAGE MISCELLANEOUS UNITS THAT LEAVE CONTAMINATED SOILS OR GROUND WATER AFTER CLOSURE.	PERTAINS TO ANY ALTERNATIVE THAT INCORPORATES TREATMENT, STORAGE OR DISPOSAL OF HAZARDOUS WASTES IN MISCELLANEOUS UNITS	ACTION
3745 58 42	B, C	PROHIBITIONS HAZARDOUS WASTE BURNED FOR ENERGY RECOVERY	DESCRIBES THE TYPES OF FURNACES, BOILERS OR CEMENT KILNS IN WHICH HAZARDOUS WASTE MAY BE BURNED FOR ENERGY RECOVERY	PERTAINS TO ANY SITE WHERE HAZARDOUS WASTE HAS BTU VALUE AND MAY BE BURNED FOR ENERGY RECOVERY ON SITE	ACTION
3745 58 43	A, C	STANDARDS FOR GENERATORS OF HAZARDOUS WASTE FUEL	ESTABLISHES STANDARDS FOR GENERATORS OF HAZARDOUS WASTE WHICH IS USED AS A FUEL OR USED TO PRODUCE A FUEL ALSO ESTABLISHES STANDARDS FOR GENERATORS WHO ARE ALSO BURNERS OF HAZARDOUS WASTE FUEL.	PERTAINS TO ANY SITE WHERE HAZARDOUS WASTE HAS BTU VALUE AND MAY BE BURNED FOR ENERGY RECOVERY ON-SITE.	ACTION
3745 58 46	A, C, D, E	STANDARDS APPLICABLE TO BURNERS OF HAZARDOUS WASTE FUEL	SPECIFIES THE OPERATING REQUIREMENTS FOR INDUSTRIAL FURNACES AND BOILERS THAT BURN HAZARDOUS WASTE FUEL	PERTAINS TO ANY SITE WHERE HAZARDOUS WASTE HAS BTU VALUE AND MAY BE BURNED FOR ENERGY RECOVERY ON-SITE.	ACTION
3745 59 01	C, E	HAZARD WASTES RESTRICTED FROM LAND DISPOSAL-EXCEPTIONS	LISTS TYPE OF RESTRICTED WASTES THAT MAY BE LAND DISPOSED LISTS TYPE OF HAZARDOUS WASTES NOT SUBJECT TO LDRs.	PERTAINS TO ANY ALTERNATIVE THAT INCORPORATES DISPOSAL OF HAZARDOUS WASTES ON SITE	ACTION
3745 59 03	A, B	DILUTION PROHIBITED AS A SUBSTITUTE FOR TREATMENT	PROHIBITS DILUTION OF A RESTRICTED WASTE OR THE RESIDUAL FROM TREATMENT OF A RESTRICTED WASTE AS A SUBSTITUTE FOR ADEQUATE TREATMENT IN ORDER TO LAND DISPOSE HAZARDOUS WASTE. DILUTION OF WATER WASTES IS NOT IMPERMISSIBLE DILUTION UNLESS A METHOD HAS BEEN SPECIFIED AS A TREATMENT STANDARD.	PERTAINS TO ANY ALTERNATIVE THAT INCORPORATES DISPOSAL OF HAZARDOUS WASTE ON-SITE.	ACTION
3745 59 04	A	TREATMENT SURFACE IMPOUNDMENT EXEMPTION	WASTES PROHIBITED FROM LAND DISPOSAL MAY BE TREATED IN A SURFACE IMPOUNDMENT PROVIDED THAT THE CONDITIONS STATED IN PARAGRAPH A ARE MET.	PERTAINS TO ANY SITE AT WHICH ON-SITE HAZARDOUS WASTES WILL BE TREATED IN A SURFACE IMPOUNDMENT.	ACTION
3745 59 07	A, B, C	WASTE ANALYSIS OF HAZARDOUS WASTE	GENERATOR SHALL TEST THE WASTE OR TEST AN EXTRACT OF THE WASTE ACCORDING TO THE FREQUENCY AND TEST METHODS DESCRIBED IN THE RULES, TO DETERMINE IF THE WASTE IS RESTRICTED FROM LAND DISPOSAL	PERTAINS TO AN ALTERNATIVE THAT INCORPORATES DISPOSAL OF HAZARDOUS WASTE ON SITE	ACTION
3745 59 09	B, C	SPECIAL RULES REGARDING WASTE THAT EXHIBIT A CHARACTERIST	PROHIBITS LAND DISPOSAL OF CHARACTERISTIC WASTE UNLESS THE WASTE COMPLIES WITH THE TREATMENT STANDARDS OF LISTED WASTES. IF THE WASTE IS BOTH LISTED AND EXHIBITS A CHARACTERISTIC THE TREATMENT STANDARD FOR THE LISTED WASTE WILL OPERATE IN LIEU OF THE STANDARD FOR THE CHARACTERISTIC WASTE	PERTAINS TO ANY SITE IN WHICH ON-SITE DISPOSAL OF HAZARDOUS WASTE IS AN ALTERNATIVE	ACTION CHEMICAL

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3745 59 30	A B.C	WASTE SPECIFIC PROHIBITIONS	PROHIBITS SPENT SOLVENT WASTES OR CONTAMINATED SOIL AND DEBRIS RESULTING FROM A RESPONSE ACTION UNDER CERCLA OR RCRA TO BE LAND DISPOSED UNLESS GENERATOR MEETS TREATMENT STANDARDS (3745 59 40 TO 44) OR HAS BEEN GRANTED AN EXTENSION OR EXEMPTION	PERTAINS TO ANY SITE IN WHICH ON SITE LAND DISPOSAL OF HAZARDOUS WASTE IS AN ALTERNATIVE	ACTION CHEMICAL
3745 59 31	A.B.C.D	DIOXIN WASTE PROHIBITIONS	PROHIBITS ON-SITE DISPOSAL OF DIOXIN WASTE UNLESS IT MEETS TREATMENT STANDARDS OF RULES 3745 59 40 TO 44 OR THE GENERATOR HAS BEEN GRANTED AN EXTENSION OR EXEMPTION	PERTAINS TO ANY SITE IN WHICH ON-SITE LAND DISPOSAL OF DIOXIN WASTE IS AN ALTERNATIVE	CHEMICAL ACTION
3745 59 32	A D.E.F	CALIFORNIA LIST WASTES PROHIBITIONS	PROHIBITS LAND DISPOSAL OF FOLLOWING WASTES: 1. LIQUID WASTES WITH pH < 2 OR pH = 2 2. LIQUID WASTES CONTAINING PCBs WITH CONC = 50 OR CONC > 50 PPM 3. LIQUID WASTES WITH HALOGENATED ORGANIC LOADING OF > OR = 1000mg/l AND LESS THAN 10,000 mg/l	PERTAINS TO ANY SITE IN WHICH ON-SITE LAND DISPOSAL OF PCB OR HOC CONTAMINATED WASTE IS AN ALTERNATIVE	CHEMICAL ACTION
3745 59 33	A B.C.D.E.F.G	FIRST THIRD WASTES PROHIBITIONS	PROHIBITS ON-SITE LAND DISPOSAL OF FIRST THIRD WASTES UNLESS REQUIREMENTS OF PARAGRAPHS D.E.F.G ARE MET	PERTAINS TO ANY SITE IN WHICH ON SITE LAND DISPOSAL OF FIRST THIRD HAZARDOUS WASTES IS AN ALTERNATIVE	CHEMICAL ACTION
3745 59 34	A H	SECOND THIRD WASTES PROHIBITIONS	PROHIBITS ON-SITE LAND DISPOSAL OF SECOND THIRD WASTES UNLESS REQUIREMENTS OF PARAGRAPHS D.E.F.G ARE MET	PERTAINS TO ANY SITE IN WHICH ON-SITE LAND DISPOSAL OF SECOND THIRD HAZARDOUS WASTES IS AN ALTERNATIVE	CHEMICAL ACTION
3745 59 35	A I	THIRD THIRD WASTES PROHIBITIONS	PROHIBITS ON SITE LAND DISPOSAL OF THIRD THIRD WASTES UNLESS REQUIREMENTS OF PARAGRAPHS D.E.F.G ARE MET	PERTAINS TO ANY SITE IN WHICH ON SITE LAND DISPOSAL OF THIRD THIRD HAZARDOUS WASTES IS AN ALTERNATIVE	CHEMICAL ACTION
3745 59 40	A B.C	APPLICABILITY OF TREATMENT STANDARDS	PROHIBITS ON SITE LAND DISPOSAL OF RESTRICTED WASTE UNLESS THE WASTE IS TESTED USING TEST METHOD IN THE APPENDIX TO RULE OAC 3745.21-24 OR THIS RULE AND THE CONCENTRATION OF ANY HAZARDOUS CONSTITUENT DOES NOT EXCEED THE CONCENTRATION SHOWN IN TABLE CCWE OF RULE 3745 59 41 OR TABLE CCW OF RULE 3745-59-43. A WASTE TREATED USING A TECHNOLOGY SPECIFIED UNDER RULE 3745-59-42 OR EQUIVALENT MAY BE LAND DISPOSED	PERTAINS TO ANY SITE IN WHICH ON SITE LAND DISPOSAL OF RESTRICTED WASTE MAY BE AN ALTERNATIVE	CHEMICAL ACTION
3745 59 41	A	TREATMENT STANDARDS AS CONCENTRATIONS IN WASTE EXTRACTS	RESTRICTED WASTE SHOULD BE TREATED TO CONCENTRATION LEVELS SPECIFIED IN THIS RULE USING TEST METHOD IN THE APPENDIX TO RULE 3745 51-24 OR THE APPENDIX TO RULE 3745 59 40	PERTAINS TO ANY SITE IN WHICH ON-SITE LAND DISPOSAL OF RESTRICTED WASTE IS AN ALTERNATIVE	CHEMICAL
3745 59 42	A C.D	TREATMENT STANDARDS EXPRESSED AS SPECIFIED TECHNOLOGIES	ESTABLISHES TREATMENT STANDARDS FOR LIQUID HAZARDOUS WASTE CONTAINING PCBs, NON LIQUID HAZARDOUS WASTE CONTAINING HALOGENATED ORGANIC COMPOUNDS (HOCs) AND LAB PACKS RADIOACTIVE HAZARDOUS MIXED WASTES ARE NOT SUBJECT TO TREATMENT STANDARDS	PERTAINS TO ANY SITE IN WHICH ON SITE TREATMENT AND DISPOSAL OF HAZARDOUS WASTE CONTAINING EITHER PCB LIQUID WASTE OR HOC NON LIQUID WASTE MIGHT TAKE PLACE	ACTION CHEMICAL
3745 59 43	A B.C	TREATMENT STANDARDS EXPRESSED AS WASTE CONCENTRATIONS	IDENTIFIES THE RESTRICTED WASTES AND THE CONCENTRATIONS OF THEIR ASSOCIATED HAZARDOUS CONSTITUENTS WHICH MAY NOT BE EXCEEDED BY THE WASTE OR TREATMENT RESIDUAL FOR THE ALLOWABLE LAND DISPOSAL OF SUCH WASTE OR RESIDUAL	PERTAINS TO ANY SITE IN WHICH ON SITE TREATMENT AND DISPOSAL OF RESTRICTED WASTE IS AN ALTERNATIVE	CHEMICAL

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3745 59 50	A, B, C, D, E	PROHIBITION ON STORAGE OF RESTRICTED WASTE	PROHIBITS ON-SITE STORAGE OF HAZARDOUS WASTES RESTRICTED FROM LAND DISPOSAL BEYOND A SPECIFIED TIME FRAME STATED IN THE RULE.	PERTAINS TO ANY SITE IN WHICH STORAGE OF HAZARDOUS WASTE WILL OCCUR ON SITE TO FACILITATE PROPER RECOVERY, TREATMENT OR DISPOSAL. IN SOME CASES STORAGE OF RESTRICTED WASTES BEYOND ONE YEAR IS ALLOWED	
3745 66 11	A, B	CLOSURE PERFORMANCE STANDARD	OWNER SHALL CLOSE FACILITY IN MANNER THAT MINIMIZES NEED FOR FURTHER MAINTENANCE AND REDUCES OR ELIMINATES POLLUTION OF GROUND WATER, SURFACE WATER OR ATMOSPHERE	CONSIDER FOR REMEDIAL PLANS THAT MAY REQUIRE EXTENDED OPERATION AND MAINTENANCE OF EQUIPMENT. CONSIDER ALTERNATIVES WITH LESS LONG-TERM O&M. APPLICABLE FOR RCRA FACILITIES, APPROPRIATE AND RELEVANT FOR OTHER SITES.	
3745 71 02		AMBIENT AIR QUALITY STANDARDS - LEAD	THE AMBIENT QUALITY STANDARD FOR LEAD SHALL BE A MAXIMUM ARITHMETIC MEAN OF 1.5 MICROGRAMS PER CUBIC METER DURING ANY CALENDAR QUARTER	CONSIDER FOR SITES WHERE INCINERATION OR WASTE FUEL RECOVERY MAY TAKE PLACE	ACTION
3745 81 11	A, B, C	MAXIMUM CONTAMINANT LEVELS FOR INORGANIC CHEMICALS	PRESENTS MAXIMUM CONTAMINANT LEVELS FOR INORGANICS	PERTAINS TO ANY SITE WHICH HAS CONTAMINATED GROUND OR SURFACE WATER THAT IS EITHER BEING USED, OR HAS THE POTENTIAL FOR USE, AS A DRINKING WATER SOURCE.	CHEMICAL
3745 81 12	A, B, C	MAXIMUM CONTAMINANT LEVELS FOR ORGANIC CHEMICALS	PRESENTS MCLS FOR ORGANICS	PERTAINS TO ANY SITE WHICH HAS CONTAMINATED GROUND OR SURFACE WATER THAT IS EITHER BEING USED, OR HAS THE POTENTIAL FOR USE, AS A DRINKING WATER SOURCE	CHEMICAL
3745 81 13	A, B	MAXIMUM CONTAMINANT LEVELS FOR TURBIDITY	PRESENTS MCLS FOR TURBIDITY	PERTAINS TO ANY SITE WHICH HAS CONTAMINATED GROUND OR SURFACE WATER THAT IS EITHER BEING USED, OR HAS THE POTENTIAL FOR USE AS A DRINKING WATER SOURCE	CHEMICAL
3745 81 14	A, E	MAXIMUM MICROBIOLOGICAL CONTAMINANT LEVELS	PRESENTS MCLS FOR MICROBIOLOGICAL CONTAMINANTS	PERTAINS TO ANY SITE WHICH HAS CONTAMINATED GROUND OR SURFACE WATER THAT IS EITHER BEING USED, OR HAS THE POTENTIAL FOR USE, AS A DRINKING WATER SOURCE	CHEMICAL
3745 81 21	A, B	MICROBIOLOGICAL CONTAMINANT SAMPLING & ANALYTICAL REQ.	PRESENTS SAMPLING AND ANALYTICAL REQUIREMENTS FOR MICROBIOLOGICAL CONTAMINANTS	PERTAINS TO ANY SITE WHICH HAS CONTAMINATED GROUND OR SURFACE WATER THAT IS EITHER BEING USED, OR HAS THE POTENTIAL FOR USE, AS A DRINKING WATER SOURCE.	CHEMICAL
3745 81 22	A, B	TURBIDITY CONTAMINANT SAMPLING & ANALYTICAL REQUIREMENTS	PRESENTS SAMPLING AND ANALYTICAL REQUIREMENTS FOR TURBIDITY	PERTAINS TO ANY SITE WHICH HAS CONTAMINATED GROUND OR SURFACE WATER THAT IS EITHER BEING USED, OR HAS THE POTENTIAL FOR USE, AS A DRINKING WATER SOURCE.	CHEMICAL
3745 81 23	A, E	INORGANIC CONTAMINANT MONITORING REQUIREMENTS	PRESENTS MONITORING REQUIREMENTS FOR INORGANIC CONTAMINANTS	PERTAINS TO ANY SITE WHICH HAS CONTAMINATED GROUND OR SURFACE WATER THAT IS EITHER BEING USED, OR HAS THE POTENTIAL FOR USE, AS A DRINKING WATER SOURCE	CHEMICAL
3745 81 24	A, E	ORGANIC CONTAMINANT MONITORING REQUIREMENTS	PRESENTS MONITORING REQUIREMENTS FOR ORGANIC CONTAMINANTS	PERTAINS TO ANY SITE WHICH HAS CONTAMINATED GROUND OR SURFACE WATER THAT IS EITHER BEING USED, OR HAS THE POTENTIAL FOR USE, AS A DRINKING WATER SOURCE	CHEMICAL
3745 81 27	A, I	ANALYTICAL TECHNIQUES	PRESENTS GENERAL ANALYTICAL TECHNIQUES FOR MCLS	PERTAINS TO ANY SITE WHICH HAS CONTAMINATED GROUND OR SURFACE WATER THAT IS EITHER BEING USED, OR HAS THE POTENTIAL FOR USE, AS A DRINKING WATER SOURCE	CHEMICAL

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3745 81 40	A, B, C	REQUIREMENTS FOR A VARIANCE FROM MCLS	PROVIDES CRITERIA BY WHICH DIRECTOR MAY GRANT VARIANCE FROM MCLS	PERTAINS TO ANY SITE WHICH HAS CONTAMINATED GROUND OR SURFACE WATER THAT IS EITHER BEING USED, OR HAS THE POTENTIAL FOR USE, AS A DRINKING WATER SOURCE.	CHEMICAL
3745 81 46		ALTERNATIVE TREATMENT TECHNIQUE VARIANCE	ALLOWS FOR THE USE OF ALTERNATIVE TREATMENT TECHNIQUES TO ATTAIN MCLS	PERTAINS TO ANY SITE WHICH HAS CONTAMINATED GROUND OR SURFACE WATER THAT IS EITHER BEING USED, OR HAS THE POTENTIAL FOR USE, AS A DRINKING WATER SOURCE	CHEMICAL
3745 81 60	A, B, C	SANITARY SURVEYS	SANITARY SURVEY REQUIREMENTS FOR SITES WHICH DO NOT COLLECT FIVE OR MORE ROUTINE TOTAL COLIFORM SAMPLES PER MONTH	PERTAINS TO ANY SITE WHICH HAS CONTAMINATED GROUND OR SURFACE WATER THAT IS EITHER BEING USED OR HAS THE POTENTIAL FOR USE AS DRINKING WATER SOURCE	CHEMICAL ACTION
3745 81 71	A, B	GEN REQ FOR FILTRATION & DISINFECTION FOR SURFACE WATER	TREATMENT STANDARDS FOR GIARDIA LAMBLIA, VIRUSES, HETEROTROPHIC PLATE COUNT BACTERIA, LEGIONELLA, TURBIDITY	PERTAINS TO ANY SITE WHICH HAS CONTAMINATED SURFACE WATER THAT IS EITHER BEING USED, OR HAS THE POTENTIAL FOR USE, AS A DRINKING WATER SOURCE	ACTION CHEMICAL
3745 81 72	A, B	DISINFECTION OF WATER FROM SURFACE WATER SOURCES	DISINFECTION REQUIREMENTS AND TREATMENT OF SURFACE WATER	PERTINS TO ANY SITE WHICH HAS CONTAMINATED SURFACE WATER THAT IS EITHER BEING USED, OR HAS THE POTENTIAL FOR USE, AS A DRINKING WATER SOURCE	ACTION CHEMICAL
3745 81 73	A, B, C	FILTRATION OF WATER FROM SURFACE WATER SOURCES	CONVENTIONAL FILTRATION, SLOW SAND FILTRATION, OR OTHER FILTRATION TREATMENT TECHNOLOGIES FOR TREATMENT OF SURFACE WATER	PERTAINS TO ANY SITE WHICH HAS CONTAMINATED SURFACE WATER THAT IS EITHER BEING USED, OR HAS THE POTENTIAL FOR USE, AS A DRINKING WATER SOURCE	ACTION
3745 81 74	A, D	TURBIDITY AND DISINFECTION MONIT REQ FOR SURFACE WATER	TURBIDITY AND DISINFECTION MONITORING REQUIREMENTS FOR SURFACE WATER SYSTEMS	PERTAINS TO ANY SITE WHICH HAS CONTAMINATED SURFACE WATER THAT IS EITHER BEING USED OR HAS THE POTENTIAL FOR USE, AS A DRINKING WATER SOURCE	ACTION
3745 9 04	A, B	LOCATION/SITING OF NEW GW WELLS	MANDATES THAT GROUND WATER WELLS BE A) LOCATED AND MAINTAINED SO AS TO PREVENT CONTAMINANTS FROM ENTERING WELL. B) LOCATED SO AS TO BE ACCESSIBLE FOR CLEANING AND MAINTENANCE.	PERTAINS TO ALL GROUND WATER WELLS ON THE SITE THAT EITHER WILL BE INSTALLED OR HAVE BEEN INSTALLED SINCE FEB 15, 1975 WOULD PERTAIN DURING THE FS IF NEW WELLS ARE CONSTRUCTED FOR TREATABILITY STUDIES.	LOCATION ACTION
3745 9 05	A, B, H	CONSTRUCTION OF NEW GW WELLS	SPECIFIES MINIMUM CONSTRUCTION REQUIREMENTS FOR NEW GROUND WATER WELLS IN REGARDS TO CASING MATERIAL, CASING DEPTH, POTABLE WATER, ANNULAR SPACES, USE OF DRIVE SHOE, OPENINGS TO ALLOW WATER ENTRY, CONTAMINANT ENTRY	PERTAINS TO ALL GROUND WATER WELLS ON THE SITE THAT EITHER WILL BE INSTALLED OR HAVE BEEN INSTALLED SINCE FEB. 15, 1975. WOULD PERTAIN DURING THE FS IF NEW WELLS ARE CONSTRUCTED FOR TREATABILITY STUDIES.	ACTION
3745 9 06	A, B, D, E	CASING REQUIREMENTS FOR NEW GW WELLS	ESTABLISHES SPECIFIC REQUIREMENTS FOR WELL CASINGS, SUCH AS SUITABLE MATERIAL, DIAMETERS AND CONDITION	PERTAINS TO ALL GROUND WATER WELLS ON THE SITE THAT EITHER WILL BE INSTALLED OR HAVE BEEN INSTALLED SINCE FEB. 15, 1975. WOULD PERTAIN DURING THE FS IF NEW WELLS ARE CONSTRUCTED FOR TREATABILITY STUDIES.	ACTION
3745 9 07	A, F	SURFACE DESIGN OF NEW GW WELLS	ESTABLISHES SPECIFIC SURFACE DESIGN REQUIREMENTS, SUCH AS HEIGHT ABOVE GROUND, WELL VENTS, WELL PUMPS, ETC	PERTAINS TO ALL GROUND WATER WELLS ON THE SITE THAT EITHER WILL BE INSTALLED OR HAVE BEEN INSTALLED SINCE FEB. 15, 1975 WOULD PERTAIN DURING THE FS IF NEW WELLS ARE CONSTRUCTED FOR TREATABILITY STUDIES.	ACTION

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3745 9 08	A.C	START UP & OPERATION OF GW WELLS	REQUIRE DISINFECTION OF NEW WELLS AND USE OF POTABLE WATER FOR PRIMING PUMPS	PERTAINS TO ALL GROUND WATER WELLS ON THE SITE THAT EITHER WILL BE INSTALLED OR HAVE BEEN INSTALLED SINCE FEB. 15, 1975 WOULD PERTAIN DURING THE FS IF NEW WELLS ARE CONSTRUCTED FOR TREATABILITY STUDIES.	ACTION
3745 9 09	A.C.D1.E.G	MAINTENANCE & OPERATION OF GW WELLS	ESTABLISHES SPECIFIC MAINTENANCE AND MODIFICATION REQUIREMENTS FOR CASING, PUMP AND WELLS IN GENERAL	PERTAINS TO ALL GROUND WATER WELLS ON THE SITE THAT EITHER WILL BE INSTALLED OR HAVE BEEN INSTALLED SINCE FEB. 15, 1975, WOULD PERTAIN DURING THE FS IF NEW WELLS ARE CONSTRUCTED FOR TREATABILITY STUDIES	ACTION
3745 9 10	A.B.C	ABANDONMENT OF TEST HOLES & GW WELLS	FOLLOWING COMPLETION OF USE, WELLS AND TEST HOLES SHALL BE COMPLETELY FILLED WITH GROUT OR SIMILAR MATERIAL OR SHALL BE MAINTAINED IN COMPLIANCE OF ALL REGULATIONS.	PERTAINS TO ALL GROUND WATER WELLS ON THE SITE THAT EITHER WILL BE INSTALLED OR HAVE BEEN INSTALLED SINCE FEB. 15, 1975.	ACTION
3745 9 11		USE OF WELLS FOR DISPOSAL	NO PERSON SHALL USE ANY WELL TO INJECT OR REINJECT ANY SUBSTANCE INTO THE GROUND WITHOUT NECESSARY PERMITS.	MAY PERTAIN TO SYSTEMS THAT ENTAIL INJECTION OR REINJECTION OF FLUID INTO THE GROUND. CONSIDER FOR IN-SITU BIOREMEDIATION, SOIL FLUSHING AND GROUND WATER PLUME CONTAINMENT.	ACTION

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1518.02		ENDANGERED PLANT SPECIES	Prohibits removal or destruction of endangered plant species (some private property exceptions)	Applies to remediation sites where chemicals may harm endangered species. Clearly establishes that receptor plant species must be considered in risk assessments. This act may require consideration of endangered species in remediations that involve movement or displacement of large volumes of surface soil.	
3704.05	A.1	PROHIBITS VIOLATION OF AIR POLLUTION CONTROL RULES	PROHIBITS EMISSION OF AN AIR CONTAMINANT IN VIOLATION SEC 3704 OR ANY RULES, PERMIT, ORDER OR VARIANCE ISSUED PURSUANT TO THAT SECTION OF THE ORC.	MAY PERTAIN TO ANY SITE WHERE EMISSIONS OF AN AIR CONTAMINANT OCCURS EITHER AS A PRE-EXISTING CONDITION OF THE SITE OR AS A RESULT OF REMEDIAL ACTIVITIES. SHOULD BE CONSIDERED FOR VIRTUALLY ALL SITES.	CHEMICAL ACTION
3714.13		DEMOLITION DEBRIS FACILITIES - VIOLATIONS PROHIBITED	PROHIBITS VIOLATIONS OF ANY SECTION OF CHAPTER 3714 CONCERNING CONSTRUCTION AND DEMOLITION DEBRIS DISPOSAL FACILITIES OR ANY RULE OR ORDER ISSUED PURSUANT TO IT. DISPOSAL OF ASBESTOS IS SPECIFICALLY PROHIBITED WITHOUT AUTHORIZATION.	PERTAINS TO CONSTRUCTION AND DEMOLITION DEBRIS FACILITIES WHERE HAZARDOUS WASTE OR HAZARDOUS CONSTITUENTS HAVE COME TO BE LOCATED. CONSIDER FOR SITES WHERE REMEDIAL ACTION WILL INCLUDE DEMOLITION OF STRUCTURES OR ASBESTOS HAS COME TO BE LOCATED.	ACTION
3734.02	(G)	EXEMPTIONS TO SOLID & HAZ. WASTE T/S/D REQUIREMENTS	PROVIDES AUTHORITY AND CONDITIONS BY WHICH THE DIRECTOR MAY EXEMPT ANY PERSON FROM PERMITTING OR OTHER REQUIREMENTS GOVERNING THE GENERATION, STORAGE, TREATMENT, TRANSPORT OR DISPOSAL OF SOLID OR HAZARDOUS WASTE.	PERTAINS TO ANY SITE AT WHICH SOLID OR HAZARDOUS WASTE HAS COME TO BE LOCATED. CERTAIN ALTERNATIVES INCLUDE EXCAVATION ACTIVITIES WHICH MAY UNCOVER SOLID AND/OR HAZARDOUS WASTE. SHOULD THOSE ACTIVITIES REQUIRE THE MANAGEMENT OF SOLID/HAZARDOUS WASTES ON SITE, AN EXEMPTION TO PERMITTING AND OTHER REQUIREMENTS MAY BE WARRANTED.	ACTION
3734.02	(H)	"DIGGING" WHERE HAZ OR SOLID WASTE FACILITY WAS LOCATED	FILLING, GRADING, EXCAVATING, BUILDING, DRILLING OR MINING ON LAND WHERE HAZARDOUS WASTE OR SOLID WASTE FACILITY WAS OPERATED IS PROHIBITED WITHOUT PRIOR AUTHORIZATION FROM THE DIRECTOR OF THE OHIO EPA.	PERTAINS TO ANY SITE AT WHICH HAZARDOUS OR SOLID WASTE HAS COME TO BE LOCATED. CERTAIN ALTERNATIVES INCLUDE EXCAVATION ACTIVITIES WHICH MAY UNCOVER SOLID AND/OR HAZARDOUS WASTE. SHOULD THOSE ACTIVITIES REQUIRE THE MANAGEMENT OF SOLID/HAZARDOUS WASTES ON SITE, AN EXEMPTION TO PERMITTING AND OTHER REQUIREMENTS MAY BE WARRANTED.	LOCATION ACTION
3734.02	(I)	AIR EMISSIONS FROM HAZARDOUS WASTE FACILITIES	NO HAZARDOUS WASTE FACILITY SHALL EMIT ANY PARTICULATE MATTER, DUST, FUMES, GAS, MIST, SMOKE, VAPOR OR ODOROUS SUBSTANCE THAT INTERFERES WITH THE COMFORTABLE ENJOYMENT OF LIFE OR PROPERTY OR IS INJURIOUS TO PUBLIC HEALTH.	PERTAINS TO ANY SITE AT WHICH HAZARDOUS WASTE WILL BE MANAGED SUCH THAT AIR EMISSIONS MAY OCCUR. CONSIDER FOR SITES THAT WILL UNDERGO MOVEMENT OF EARTH OR INCINERATION.	
3734.03		PROHIBITS OPEN DUMPING OR BURNING	PROHIBITS OPEN BURNING OR OPEN DUMPING OF SOLID WASTE OR TREATED OR UNTREATED INFECTIOUS WASTE.	PERTAINS TO ANY SITE AT WHICH SOLID WASTE HAS COME TO BE LOCATED OR WILL BE GENERATED DURING A REMEDIAL ACTION.	ACTION LOCATION
3734.04.1	A.C.D.G	EXPLOSIVE GAS MONITORING	REQUIRES EXPLOSIVE GAS MONITORING PLANS FOR SANITARY LANDFILLS AND PROVIDES AUTHORITY TO THE DIRECTOR OF OHIO EPA TO ORDER AN OWNER OR OPERATOR OF A FACILITY TO IMPLEMENT AN EXPLOSIVE GAS MONITORING AND REPORTING PLAN.	PERTAINS TO ALL SANITARY LANDFILLS EXCEPT FOR THOSE THAT DISPOSED OF NONPUTRESCIBLE WASTES.	LOCATION ACTION
17.14.05	(D)(b)(1)	HAZARDOUS WASTE FACILITY ENVIRONMENTAL IMPACT	A HAZARDOUS WASTE FACILITY INSTALLATION AND OPERATION PERMIT SHALL NOT BE APPROVED UNLESS IT PROVES THAT THE FACILITY REPRESENTS THE MINIMUM ADVERSE ENVIRONMENTAL IMPACT, CONSIDERING THE STATE OF AVAILABLE TECHNOLOGY, THE NATURE AND ECONOMICS OF VARIOUS ALTERNATIVES AND OTHER PERTINENT CONSIDERATIONS.	PERTAINS TO ALL SITES AT WHICH HAZARDOUS WASTE HAS COME TO BE LOCATED AND/OR AT WHICH HAZARDOUS WASTE WILL BE TREATED, STORED OR DISPOSED OF. MAY FUNCTION AS SITING CRITERIA.	

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TUSCARAWAS COUNTY

REVISED CODE SECTION	PERTINENT PARAGRAPH	TITLE OR SUBJECT OF REGULATION	DESCRIPTION OF REGULATION	APPLICATION OF REGULATION	ARAR TYPE
3734 05	(D)6.d.g.h	HAZARDOUS WASTE SITING CRITERIA	(D),6.d A HAZARDOUS WASTE FACILITY INSTALLATION AND OPERATION PERMIT SHALL NOT BE APPROVED UNLESS IT PROVES THAT THE FACILITY REPRESENTS THE MINIMUM RISK OF ALL OF THE FOLLOWING (i)CONTAMINATION OF GROUND AND SURFACE WATERS (ii)FIRES OR EXPLOSIONS FROM TREATMENT, STORAGE OR DISPOSAL METHODS (iii)ACCIDENT DURING TRANSPORTATION (iv)IMPACT ON PUBLIC HEALTH AND SAFETY (v)AIR POLLUTION (vi)SOIL CONTAMINATION (D),6.g.h PROHIBITS THE FOLLOWING LOCATIONS FOR TREATMENT, STORAGE AND DISPOSAL OF ACUTE HAZARDOUS WASTE: (i) WITHIN 2000 FEET OF ANY RESIDENCE, SCHOOL, HOSPITAL, JAIL OR PRISON; (ii) ANY NATURALLY OCCURRING WETLAND (iii) ANY FLOOD HAZARD AREA (iv) WITHIN ANY STATE PARK OR NATIONAL PARK OR RECREATION AREA	PERTAINS TO ALL SITES AT WHICH HAZARDOUS WASTE HAS COME TO BE LOCATED AND/OR AT WHICH HAZARDOUS WILL BE TREATED, STORED OR DISPOSED OF MAY FUNCTION AS SITING CRITERIA	ACTION LOCATION
3734 14 1		CONDITIONS FOR DISPOSAL OF ACUTE HAZARDOUS WASTE	PROHIBITS DISPOSAL OF ACUTE HAZARDOUS WASTE UNLESS IT: (1) CANNOT BE TREATED, RECYCLED OR DESTROYED, (2) HAS BEEN REDUCED TO ITS LOWEST LEVEL OF TOXICITY, AND (3) HAS BEEN COMPLETELY ENCAPSULATED OR PROTECTED TO PREVENT LEACHING	PERTAINS TO ANY SITE WHERE ACUTE HAZARDOUS WASTE HAS COME TO BE LOCATED.	CHEMICAL ACTION
3767 13		PROHIBITION OF NUISANCES	PROHIBITS NOXIOUS EXHALATIONS OR SMELLS AND THE OBSTRUCTION OF WATERWAYS	PERTAINS TO ANY SITE THAT MAY HAVE NOXIOUS SMELLS OR MAY OBSTRUCT WATERWAYS	ACTION CHEMICAL
3767 14		PROHIBITION OF NUISANCES	PROHIBITION AGAINST THROWING REFUSE, OIL, OR FILTH INTO LAKES, STREAMS, OR DRAINS	PERTAINS TO ALL SITES LOCATED ADJACENT TO LAKES, STREAMS, OR DRAINS	ACTION CHEMICAL
6101 19		CONSERVANCY DISTRICTS	BOARD OF DIRECTORS OF A CONSERVANCY DISTRICT MAY MAKE AND ENFORCE RULES AND REGULATIONS PERTAINING TO CHANNELS, DITCHES, PIPES, SEWERS, ETC	THIS STATUTE PERTAINS TO ANY SITE THAT MAY AFFECT A CONSTRUCTION WITHIN A CONSERVANCY DISTRICT	ACTION
6111 04		ACTS OF POLLUTION PROHIBITED	POLLUTION OF WATERS OF THE STATE IS PROHIBITED	PERTAINS TO ANY SITE WHICH HAS CONTAMINATED ON-SITE GROUND OR SURFACE WATER OR WILL HAVE A DISCHARGE TO ON-SITE SURFACE OR GROUND WATER	ACTION
6111 04 2		RULES REQUIRING COMPLIANCE WITH NATIONAL EFFLUENT STDS	ESTABLISHES REGULATIONS REQUIRING COMPLIANCE WITH NATIONAL EFFLUENT STANDARDS	PERTAINS TO ANY SITE WHICH WILL HAVE A POINT SOURCE DISCHARGE	ACTION
6111 04 3		INJECTION OF SEWAGE OR WASTES INTO WELLS	ESTABLISHES A REGULATORY PROGRAM FOR THE INJECTION OF WASTES INTO WELLS THAT PREVENTS THE CONTAMINATION OF UNDERGROUND SOURCES OF DRINKING WATER	PERTAINS TO ANY SITE THAT EITHER HAS OR INTENDS TO INJECT WASTES OF ANY TYPE INTO WELLS	ACTION
6111 07	A C	WATER POLLUTION CONTROL REQUIREMENTS DUTY TO COMPLY	PROHIBITS FAILURE TO COMPLY WITH REQUIREMENTS OF SECTIONS 6111 01 TO 6111 08 OR ANY RULES, PERMIT OR ORDER ISSUED UNDER THOSE SECTIONS	PERTAINS TO ANY SITE WHICH HAS CONTAMINATED GROUND WATER OR SURFACE WATER OR WILL HAVE A DISCHARGE TO ON-SITE SURFACE OR GROUND WATER	ACTION

APPENDIX B

ADMINISTRATIVE RECORD INDEX

**ADMINISTRATIVE RECORD
(Index and Documents)**

FOR THE

**REILLY TAR & CHEMICAL CORP. SUPERFUND SITE
DOVER, OHIO**

APRIL 1991

**United States Environmental Protection Agency
Region V
230 South Dearborn Street
Chicago, Illinois 60604**



ADMINISTRATIVE RECORD INDEX
REILLY TAR & CHEMICAL CORP.
SUPERFUND SITE
DOVER, OHIO

FICHE/FRAME	PAGES	DATE	TITLE	AUTHOR	RECIPIENT	DOCUMENT TYPE	DOCMUMBER
8	88/08/31		Letter re: Reilly Tar & Chemical Site Special Notice of Potential Liability	Gade, M. - U.S. EPA	Various PRPs	Correspondence	1
72	88/11/23		PRP's responses to Notice Letters	Various PRPs	U.S. EPA	Correspondence	2
11	90/09/28		Letter re: request for information Pursuant to Section 104(e) of CERLA and Section 3007 of RCRA for the Reilly Tar & Chemical Company at Dover, Tuscarawas County, Ohio	Traub, J. - Acting Chief Superfund Program Management Branch	Sanders, P. - Reel Prop. Div.	Correspondence	3
3	90/11/27		Letter re: seeking information concerning the generation, storage, treatment and disposal of hazardous substances that have been or treated to be released at the Reilly Tar Site	CSX - Neiser, C. Senior Counsel	Malek, J. - U.S. EPA	Correspondence	4
6	00/00/00		Administrative Order By Consent Pursuant To Section 106 Of The Comprehensive Environmental Response, Compensation, and Liability Act 1980	U.S. EPA - Constantelos, B.	Reilly Tar	Pleadings/Orders	5
33	89/03/29		Administrative Order Re: Comprehensive Environmental Response, Compensation, and Liability Act of 1980 as amended	U.S. EPA - Constantelos, B.	Reilly Tar & Chem. Corp.	Pleadings/Orders	6

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REILLY TAR & CHEMICAL CORP.
SUPERFUND SITE
DOVER, OHIO

FICHE/FRAME	PAGES	DATE	TITLE	AUTHOR	RECIPIENT	DOCUMENT TYPE	DOCLNUMBER
16	90/05/18	Administrative Order By Consent Pursant to complete emergency removal activities at the site	U.S. EPA - Niedersgang, M.	Reilly Tar & Chem. Corp.	Pleadings/Orders	7	
5	84/04/30	Preliminary Assessment Report	McCoy, M. - U.S. EPA	McCoy, M. - Ohio EPA	Reports/Studies	8	
100	85/12/06	Inspection Report for Reilly Tar and Chemical Corporation	CH2M Hill Ecology & Environment	U.S. EPA	Reports/Studies	9	
190	86/11/19	Hazard Ranking System scoring package with attachments	U.S. EPA	U.S. EPA	Reports/Studies	10	
29	88/09/26	Revised Analytical Report Proj.# 88/108	Wadsworth/Alert Laboratories, Inc.	Omara, M. & Weston, R.	Reports/Studies	11	
88	89/12/00	Health and Safety Plan RI/FS	ENSR Consulting and Engineering	Reilly Industries, Inc.	Reports/Studies	12	
42	90/03/00	Community Relations Plan for Reilly Tar & Chemical site	U.S. EPA		Reports/Studies	13	
70	90/04/26	Work Plan for Expedited Response Action for Surficial Contamination at the Reilly Tar & Chemical Corporation Site	Quillin Excavating Co. Reilly Industries, Inc.	Reilly Industries, Inc.	Reports/Studies	14	
204	90/08/00	Expedited Response Action Report for Removal of Surficial Contamination	ENSR Consulting and Engineering	Reilly Tar & Chem. Corp.	Reports/Studies	15	

ADMINISTRATIVE RECORD INDEX
REILLY TAR & CHEMICAL CORP.
SUPERFUND SITE
DOVER, OHIO

FICNE/FRAHE	PAGES	DATE	TITLE	AUTHOR	RECIPIENT	DOCUMENT TYPE	DOCUMENT NUMBER
121	91/01/25		Quality Assurance Project Plan RI/FS Technical Oversight	B&V Waste Science and Technology Corp.	U.S. EPA	Reports/Studies	16
190	91/03/00		Site - Specific Sampling Plan RI/FS	ENSR Consulting and Engineering	Reilly Industries, Inc.	Reports/Studies	17
161	91/03/00		Work Plan RI/FS	ENSR Consulting and Engineering	Reilly Tar Chem. Corp.	Reports/Studies	18
459	91/04/00		Quality Assurance Project Plan RI/FS	ENSR Consulting and Engineering	Reilly Industries, Inc.	Reports/Studies	19

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U.S. EPA ADMINISTRATIVE RECORD
 REMEDIAL ACTION
 REILLY TAR & CHEMICAL CORPORATION SITE
 DOVER, OHIO
 UPDATE #1
 01/16/97

DOC#	DATE	AUTHOR	RECIPIENT	TITLE/DESCRIPTION	PAGES
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1	06/00/93	ENSR	U.S. EPA	Remedial Investigation Report: Vol. 1 of 2 (Text, Tables and Figures)	238
2	06/00/93	ENSR	U.S. EPA	Remedial Investigation Report: Vol. 2 of 2 (Appendices A-K)	289
3	08/00/93	ENSR	U.S. EPA	Baseline Human Health and Ecological Risk Assessment: Vol. 1 of 2 (Text, Tables and Figures)	227
4	08/00/93	ENSR	U.S. EPA	Baseline Human Health and Ecological Risk Assessment: Vol. 2 of 2 (Appendices A-L)	600
5	04/00/95	ENSR	U.S. EPA	Treatability Study Work Plan	73
6	05/00/96	ENSR	U.S. EPA	Addendum to Site Specific Sampling Plan for the RI/FS	47
7	07/00/96	ENSR	U.S. EPA	Technical Memorandum: Results of Performance of Addendum to the Site Specific Sampling Plan for the RI/FS	65
8	08/00/96	ENSR	U.S. EPA	Feasibility Study Report: Vol. 1 of 2 (Text, Tables and Figures)	345
9	08/00/96	ENSR	U.S. EPA	Feasibility Study Report: Vol. 2 of 2 (Appendices A-K)	563
10	08/02/96	Maruhnich, E., ENSR	Smith, E., U.S. EPA	Letter Forwarding Attached Summary of the "Results of Performance of Addendum to the Site Specific Sampling Plan RI/FS" Document (Addendum to July 1996 Technical Memorandum)	4
11	09/25/96	Osborne, C., Ohio EPA	Smith, T., U.S. EPA	Letter re: DEPA Comments on the August 1996 Feasibility Study	7
12	09/30/96	Osborne, C., Ohio EPA	Smith, T., U.S. EPA	Letter re: DEPA's Comments Concerning the Derivations of Cleanup Numbers and Findings on HELP Model Used to Evaluate the Soil Cap in the Feasibility Study	3
13	10/00/96	ENSR	U.S. EPA	Feasibility Study Addendum	113
14	10/01/96	Osborne, C. Ohio EPA	Smith, T., U.S. EPA	Letter re: DEPA's Comments on the August 1996 Feasibility Study	2

DOC#	DATE	AUTHOR	RECIPIENT	TITLE/DESCRIPTION	PAGES
====	====	=====	=====	=====	=====
15	10/01/96	Smith, E., U.S. EPA	Rivers, P., Reilly Industries, Inc.	Letter re: U.S. EPA/Ohio EPA's Final Comments on the August 30, 1996 Feasibility Study	9
16	11/20/96	Smith, E., U.S. EPA	Rivers, P., Reilly Industries, Inc.	Letter re: Feasibility Study Addendum for the Reilly Tar Site	2
17	12/03/96	Rivers, P., Reilly Industries, Inc.	Smith, E., U.S. EPA	Letter re: Reilly Tar's Response to U.S. EPA's November 20, 1996 Letter Concerning the Feasibility Study Addendum	16
18	12/06/96	Rivers, P., Reilly Industries, Inc.	Smith, E., U.S. EPA	Letter Forwarding Attached Replacement Pages for the Soil Volume Figures to the October 18, 1996 Feasibility Study Addendum	12
19	12/10/96	Smith, E., U.S. EPA	Rivers, P., Reilly Industries, Inc.	Letter re: Feasibility Study Addendum	2
20	01/00/97	U.S. EPA		Proposed Plan	10

APPENDIX C

STATE OF OHIO LETTER OF CONCURRENCE



State of Ohio Environmental Protection Agency

STREET ADDRESS:

1800 WaterMark Drive
Columbus, OH 43215-1099

TELE: (614) 644-3020 FAX: (614) 644-2329

MAILING ADDRESS:

P.O. Box 1049
Columbus, OH 43216-1049

April 2, 1997

Mr. William Muno
Regional Administrator
United States Environmental Protection Agency
Region V
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

Dear Mr. Muno:

The Ohio Environmental Protection Agency (Ohio EPA) has received and reviewed the final Record of Decision (ROD) for the Reilly Tar and Chemical Site in Tuscarawas County, Ohio. The final ROD has incorporated Ohio's comments dated March 27, 1997.

The Ohio EPA concurs with alternative #3, the selected remedial alternative for this site. The selected alternative includes the following components:

- * Excavation and off-site thermal treatment of drainage ditch and river sediments, surface soils and impacted perched zone material from the collection trench installation contaminated with greater than 100 ppm Benzo(a)pyrene toxic equivalents (B(a)P-TE);
- * Off-site disposal of solidified tarry materials, or recycle tarry materials as a fuel or feedstock;
- * Excavation and on-site disposal of surface water drainage ditch and river sediments, surface soils and impacted perched zone material contaminated with less than 100 ppm B(a)P-TE but greater than 5 ppm B(a)P-TE;
- * Construction of an Ohio Subtitle D Solid Waste Cap over on-site disposed materials; a soil cover over the remainder of the site;
- * Hydraulic control and collection of perched ground water.

- * Natural attenuation/long-term monitoring of shallow regional ground water;
- * Sampling and analysis of sediments in the river to monitor ecological risk to aquatic species; and
- * Institutional controls to completely restrict the use of ground water on-site and to restrict the property to industrial/commercial use.

The estimated net present worth of the selected remedy is \$ 2,810,300. The total estimated operation and maintenance costs over a 30 year period are \$ 1,431,200.

The Ohio EPA believes that the selected remedy provides the best balance among the alternatives for the Reilly Tar and Chemical Corporation site.

Sincerely,



Donald R. Schregardus
Director

cc: Jan Carlson, Chief, DERR
Ray Beaumier, Section Manager, T&PSS, DERR
Heidi Sorin, Section Manager, C&RES, DERR
Christine Osborne, DERR, SEDO
Pat Campbell, DERR
Ted Smith, RPM, USEPA