DOCUMENTATION OF ENVIRONMENTAL INDICATOR DETERMINATION

RCRA Corrective Action
Environmental Indicator (EI) RCRIS code (CA750)

Migration of Contaminated Groundwater Under Control

Facility Name:	BASF Corporation
Facility Address:	471 Howard Avenue, Holland, MI 49424
Facility EPA ID #:	MID 006 411 953

1. Has **all** available relevant/significant information on known and reasonably suspected releases to the groundwater media, subject to RCRA Corrective Action (e.g., from Solid Waste Management Units (SWMU), Regulated Units (RU), and Areas of Concern (AOC)), been **considered** in this EI determination?

X If yes - check here and continue with #2 below.
___ If no - re-evaluate existing data, or
___ if data are not available skip to #6 and enter"IN" (more information needed) status code.

BACKGROUND

Definition of Environmental Indicators (for the RCRA Corrective Action)

Environmental Indicators (EI) are measures being used by the RCRA Corrective Action program to go beyond programmatic activity measures (e.g., reports received and approved, etc.) to track changes in the quality of the environment. The two EI developed to-date indicate the quality of the environment in relation to current human exposures to contamination and the migration of contaminated groundwater. An EI for non-human (ecological) receptors is intended to be developed in the future.

Definition of "Migration of Contaminated Groundwater Under Control" EI

A positive "Migration of Contaminated Groundwater Under Control" EI determination ("YE" status code) indicates that the migration of "contaminated" groundwater has stabilized, and that monitoring will be conducted to confirm that contaminated groundwater remains within the original "area of contaminated groundwater" (for all groundwater "contamination" subject to RCRA corrective action at or from the identified facility (i.e., site-wide)).

Relationship of EI to Final Remedies

While Final remedies remain the long-term objective of the RCRA Corrective Action program the EI are near-term objectives which are currently being used as Program measures for the Government Performance and Results Act of 1993, GPRA). The "Migration of Contaminated Groundwater Under Control" EI pertains ONLY to the physical migration (i.e., further spread) of contaminated ground water and contaminants within groundwater (e.g., non-aqueous phase liquids or NAPLs). Achieving this EI does not substitute for achieving other stabilization or final remedy requirements and expectations associated with sources of contamination and the need to restore, wherever practicable, contaminated groundwater to be suitable for its designated current and future uses.

Duration / Applicability of EI Determinations

EI Determinations status codes should remain in RCRIS national database ONLY as long as they remain true (i.e., RCRIS status codes must be changed when the regulatory authorities become aware of contrary information).

2. Is **groundwater** known or reasonably suspected to be **"contaminated"**[1] above appropriately protective "levels"

(i.e., applicable promulgated standards, as well as other appropriate standards, guidelines, guidance, or criteria) from releases subject to RCRA Corrective Action, anywhere at, or from, the facility?

X If yes - continue after identifying key contaminants, citing appropriate "levels," and referencing supporting documentation.

___ If no - skip to #8 and enter "YE" status code, after citing appropriate "levels," and referencing supporting documentation to demonstrate that groundwater is not "contaminated."

___ If unknown - skip to #8 and enter "IN" status code.

Rationale and Reference(s):

Based on the results of groundwater monitoring conducted at 29 onsite monitoring wells between September 1999 and June 2003, groundwater containing constituents of concern (COC) extends between the former OCM Building, the original source area, and Lake Macatawa. Shallow groundwater at the site contains primarily 1, 2, 4-trichlorobenzene, 1,3- and 1,4-dichlorobenzene, and chlorobenzene, at levels that exceed the acceptable screening levels. The screening levels were based on the Michigan Part 201 Generic Cleanup Criteria for groundwater, Drinking Water, Groundwater Contact and the Groundwater/Surface Water Interface Criteria. The source of these primary COC in groundwater was the historic use of trichlorobenzene in phthalocyanine crude blue pigment manufacturing at the site between 1965 and 1983. (See Fig. 4-15)

References:
ENSR Corporation, Final RCRA Facility Investigation Report, Former BASF Holland, MI Facility, August 2003

ENSR International, Draft Corrective Measures Study Report, Former BASF Holland, MI Facility, March 2005

Michigan Department of Environmental Quality, Remediation and Redevelopment Division, Operational Memorandum No. 1, Part 201 Cleanup Criteria, December 2004

3. Has the **migration** of contaminated groundwater **stabilized** (such that contaminated groundwater is expected to remain within "existing area of contaminated groundwater"[2] as defined by the monitoring locations designated at the time of this determination)?

X If yes - continue, after presenting or referencing the physical evidence (e.g., groundwater sampling/measurement/migration barrier data) and rationale why contaminated groundwater is expected to remain within the (horizontal or vertical) dimensions of the "existing area of groundwater contamination"[2]).

___ If no (contaminated groundwater is observed or expected to migrate beyond the designated locations defining the "existing area of groundwater contamination"[2]) - skip to #8 and enter "NO" status code, after providing an explanation.

___ If unknown - skip to #8 and enter "IN" status code.

Rationale and Reference(s):

The BASF site is located in Holland, Michigan on the western portion of Lake Macatawa. The groundwater occurs at a shallower depth south of Howard Avenue as the topography slopes toward Lake Macatawa in the southeast direction. See Fig. 5-1. This unconfined aquifer extends to the Forty-Foot Silt, which is two to three feet thick and occurs at an approximate depth of 40 feet bgs. Groundwater also occurs below the Forty-Foot Silt in an approximately 10-foot thick aquifer above

the Fifty-Foot Silt, which occurs at a depth of approximately 50 feet bgs. It is likely that this deeper aquifer is hydraulically connected to the upper aquifer, although the Forty-Foot Silt layer may act as a partially or semi-confining unit. The overall groundwater flow direction in both the lower and upper aquifers is generally to the southeast towards Lake Macatawa. This is consistent with regional groundwater flow, which is southeast toward Lake Macatawa. Based on the results of groundwater monitoring conducted at 29 onsite monitoring wells between September 1999 and June 2003, concentrations of the primary COI, 1,2,4-trichlorobenzene, 1,3- and 1,4-dichlorobenzene and chlorobenzene, the migration of contaminated groundwater has stabilized at the site and is expected to remain onsite within the existing area of contaminated groundwater. Previously an Interim Measure, involving source removal and the construction of the air sparge curtain constructed across the contaminated groundwater plume perpendicular to groundwater flow allows for the mitigation of contaminated groundwater downgradient of the curtain. (See Fig.3-1 and Tables).

References:
ENSR Corporation, Final RCRA Facility Investigation Report, Former BASF Holland, MI Facility, August 2003

ENSR Corporation, First Half 2003 Groundwater Monitoring Report, Former BASF Holland, MI Facility, November 2003

ENSR International, Draft Corrective Measures Study Report, Former BASF Holland, MI Facility, March 2005

4. Does "contaminated" groundwater **discharge** into **surface water** bodies?

X If yes - continue after identifying potentially affected surface water bodies.

__ If no - skip to #7 (and enter a "YE" status code in #8, if #7 = yes) after providing an explanation and/or referencing documentation supporting that groundwater "contamination" does not enter surface water bodies.

__ If unknown - skip to #8 and enter "IN" status code.

Rationale and Reference(s):

With the exception of monitoring wells PMW-3D, PZ-1R and PMW-4D located downgradient of OPSA 5, a historic source area for COI in groundwater, the results of air sparge testing conducted at the site from July 2006 through March 2007, demonstrates the effectiveness of air sparging in achieving site-specific media protection standards[3] in most of the monitoring wells downgradient of the sparge curtain. **Media Protection Standards are the Michigan Rule 57 Final Chronic Value (FCV) for protection of aquatic life in surface water.** The media protection standards recorded in the summarized Table below are 10 times the FCV for each COI, as the maximum allowed by **MDEQ to account for dilution effects for non-bioaccumulative compounds in groundwater discharges to surface water (see the** Tables below). Based on the concentration of COI in these 3 monitoring wells, contaminants are still discharging into Lake Macatawa. Although the media protection standards are exceeded in a few monitoring wells, the decreasing trend of COI in these deep wells is believed to be a result of short-term desorption of COI that historically adsorbed to the 40-Foot Silt at the base of the groundwater plume. The following tables summarize results of the IM performance monitoring.

IM Performance Monitoring: COI Concentrations in Groundwater at Cross-gradient Monitoring Well PMW-1

	Baseline	Post-startup Performance Monitoring				
COI, µg/l	July 2006	October 2006	November 2006	December 2006	March 2007	Media Protection Standard, **µg/l** [3]
chlorobenzene	7.8	ND<1.0	ND<1.0	ND<1.0	ND<1.0	250
1,3-dichlorobenzene	8.8	0.19	ND<1.0	0.80	ND<1.0	280
1,4-dichlorobenzene	15	0.22	ND<1.0	0.43	ND<1.0	170
1,2,4-trichlorobenzene	12.5	ND<1.0	ND<1.0	0.62	ND<1.0	300

ND<1.0 = not detected above laboratory Reporting Limit of 1.0 **µg/l**

IM Performance Monitoring: COI Concentrations in Groundwater at Down-gradient Monitoring Well PMW-2S

	Baseline	Post-startup Performance Monitoring				
COI, µg/l	July 2006	October 2006	November 2006	December 2006	March 2007	Media Protection Standard, **µg/l** [3]
chlorobenzene	26	39	19	27	39	250
1,3-dichlorobenzene	120	150	43	33	52	280
1,4-dichlorobenzene	160	210	63	65	110	170
1,2,4-trichlorobenzene	150	120	53	19	7.4	300

IM Performance Monitoring: COI Concentrations in Groundwater at Down-gradient Monitoring Well PMW-2D

	Baseline	Post-startup Performance Monitoring				
COI, µg/l	July 2006	October 2006	November 2006	December 2006	March 2007	Media Protection Standard, **µg/l**[3]
chlorobenzene	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	250
1,3-dichlorobenzene	ND<1.5	ND<1.0	ND<1.0	0.32	0.28	280
1,4-dichlorobenzene	ND<1.4	ND<1.0	ND<1.0	ND<1.0	0.57	170
1,2,4-trichlorobenzene	ND<1.8	ND<1.0	ND<1.0	ND<0.25	ND<1.0	300

IM Performance Monitoring: COI Concentrations in Groundwater at Down-gradient Monitoring Well PMW-3S

	Baseline	Post-startup Performance Monitoring				
COI, µg/l	July 2006	October 2006	November 2006	December 2006	March 2007	Media Protection Standard, **µg/l**[3]
chlorobenzene	790	60	3.5	4.3	6.0	250
1,3-dichlorobenzene	830	850	45	18	22	280
1,4-dichlorobenzene	1200	465	11	17	9.7	170
1,2,4-trichlorobenzene	1850	980	120	1.4	7.7	300

IM Performance Monitoring: COI Concentrations in Groundwater at Down-gradient Monitoring Well PMW-3D

	Baseline	Post-startup Performance Monitoring				
COI, µg/l	July 2006	October 2006	November 2006	December 2006	March 2007	Media Protection Standard, **µg/l**[3]
chlorobenzene	3300	3700	3300	2400	510	250
1,3-dichlorobenzene	ND<250	190	310	260	120	280
1,4-dichlorobenzene	870	1200	1900	2100	1400	170
1,2,4-trichlorobenzene	ND<120	ND<170(32)*	24	ND<96(18)*	ND<40(7.6)*	300
* ND<170(32) = not detected above laboratory Reporting Limit of 170 **µg/l** with Method Detection Limit of 32 **µg/l**						

IM Performance Monitoring: COI Concentrations in Groundwater at Down-gradient Monitoring Well PZ-1R

	Baseline	Post-startup Performance Monitoring				
COI, µg/l	July 2006	October 2006	November 2006	December 2006	March 2007	Media Protection Standard, **µg/l**[3]
chlorobenzene	10	49	28	41	ND<50	250
1,3-dichlorobenzene	3700	3200	2200	2300	1400	280
1,4-dichlorobenzene	1200	1100	765	820	550	170
1,2,4-trichlorobenzene	2600	1900	1800	1700	1200	300

IM Performance Monitoring: COI Concentrations in Groundwater at Down-gradient Monitoring Well PMW-4S

	Baseline	Post-startup Performance Monitoring				
COI, µg/l	July 2006	October 2006	November 2006	December 2006	March 2007	Media Protection Standard, **µg/l**[3]
chlorobenzene	300	770	450	300	82	250
1,3-dichlorobenzene	320	270	210	220	130	280
1,4-dichlorobenzene	220	210	160	160	97	170
1,2,4-trichlorobenzene	ND<29	ND<25	ND<20	4.6	4.7	300

IM Performance Monitoring: COI Concentrations in Groundwater at Down-gradient Monitoring Well PMW-4D

	Baseline	Post-startup Performance Monitoring				
COI, µg/l	July 2006	October 2006	November 2006	December 2006	March 2007	Media Protection Standard, **µg/l**[3]
chlorobenzene	3200	3000	3200	2800	2300	250
1,3-dichlorobenzene	300	360	380	400	310	280
1,4-dichlorobenzene	1200	360	1600	1600	1600	170
1,2,4-trichlorobenzene	ND<33	ND<67(13)*	ND<100(19)*	ND<83(16)*	ND<83(16)*	300
* ND<67(13) = not detected above laboratory Reporting Limit of 67 **µg/l** with Method Detection Limit of 13 **µg/l**						

IM Performance Monitoring: COI Concentrations in Groundwater at Cross-gradient Monitoring Well PMW-5

	Baseline	Post-startup Performance Monitoring				
COI, µg/l	July 2006	October 2006	November 2006	December 2006	March 2007	Media Protection Standard, **µg/l**[3]
chlorobenzene	590	920	780	650	590	250
1,3-dichlorobenzene	740	1100	1000	980	920	280
1,4-dichlorobenzene	445	730	720	700	610	170
1,2,4-trichlorobenzene	24	25	20	40	ND<33(6.3)*	300
* ND<33(6.3) = not detected above laboratory Reporting Limit of 33 **µg/l** with Method Detection Limit of 6.3 **µg/l**						

[3] ***Media Protection Standards are the Michigan Rule 57 Final Chronic Value (FCV) for protection of aquatic life in surface water. MDEQ allows a maximum 10-fold factor for dilution for non-bioaccumulative compounds in groundwater discharges to surface water.***

References:

ENSR International, Draft Corrective Measures Study Report, Former BASF Holland, MI Facility, March 2005

ENSR Corporation, Work Plan for RCRA Interim Measure, Former BASF Facility, Holland, MI, February 2006 ENSR International, Draft Corrective Measures Study Report, Former BASF Holland, MI Facility, March 2005

ENSR Corporation, Work Plan for RCRA Interim Measure, Former BASF Facility, Holland, MI, February 2006

ENSR Corporation, Bi-Monthly Status Report, Former BASF Holland, MI Facility, September-October, 2006

ENSR Corporation, Bi-Monthly Status Report, Former BASF Holland, MI Facility, November-December, 2006

ENSR Corporation, Bi-Monthly Status Report, Former BASF Holland, MI Facility, January-February, 2007

ENSR Corporation, Bi-Monthly Status Report, Former BASF Holland, MI Facility, January-February, 2007 Amended

5. Is the **discharge** of "contaminated" groundwater into surface water likely to be **"insignificant"** (i.e., the maximum concentration[4] of each contaminant discharging into surface water is less than 10 times their appropriate groundwater "level," and there are no other conditions (e.g., the nature, and number, of discharging contaminants, or environmental setting), which significantly increase the potential for unacceptable impacts to surface water, sediments, or eco-systems at these concentrations)?

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___ If yes - skip to #7 (and enter "YE" status code in #8 if #7 = yes), after documenting: 1) the maximum known or reasonably suspected concentration[3] of <u>key</u> contaminants discharged above their groundwater "level," the value of the appropriate "level(s)," and if there is evidence that the concentrations are increasing; and 2) provide a statement of professional judgement/explanation (or reference documentation) supporting that the discharge of groundwater contaminants into the surface water is not anticipated to have unacceptable impacts to the receiving surface water, sediments, or eco-system.

<u>X</u> **If** no - (the discharge of "contaminated" groundwater into surface water is potentially significant) - continue after documenting: 1) the maximum known or reasonably suspected concentration[3] of <u>each</u> contaminant discharged above its groundwater "level," the value of the appropriate "level(s)," and if there is evidence that the

concentrations are increasing; and 2) for any contaminants discharging into surface water in concentrations[3] greater than 100 times their appropriate groundwater "levels," the estimated total amount (mass in kg/yr) of each of these contaminants that are being discharged (loaded) into the surface water body (at the time of the determination), and identify if there is evidence that the amount of discharging contaminants is increasing.

___ If unknown - enter "IN" status code in #8.

Rationale and Reference(s):
As summarized in the above Table, the concentrations of some COI are trending toward lower values but remain above media protection standards in performance monitoring wells PMW-3D, PZ-1R and PMW-4D located downgradient of OPSA 5, a historic source area for COI in groundwater.
References:

6. Can the **discharge** of "contaminated" groundwater into surface water be shown to be "**currently acceptable**" (i.e., not cause impacts to surface water, sediments or eco-systems that should not be allowed to continue until a final remedy decision can be made and implemented[5])?

X If yes - continue after either: 1) identifying the Final Remedy decision incorporating these conditions, or other site-specific criteria (developed for the protection of the site's surface water, sediments, and eco-systems), and referencing supporting documentation demonstrating that these criteria are not exceeded by the discharging groundwater; OR
2) providing or referencing an interim-assessment,[6] appropriate to the potential for impact, that shows the discharge of groundwater contaminants into the surface water is (in the opinion of a trained specialists, including ecologist) adequately protective of receiving surface water, sediments, and eco-systems, until such time when a full assessment and final remedy decision can be made. Factors which should be considered in the interim-assessment (where appropriate to help identify the impact associated with discharging groundwater) include: surface water body size, flow, use/classification/habitats and contaminant loading limits, other sources of surface water/sediment contamination, surface water and sediment sample results and comparisons to available and appropriate surface water and sediment "levels," as well as any other factors, such as effects on ecological receptors (e.g., via bio-assays/benthic surveys or site-specific ecological Risk Assessments), that the overseeing regulatory agency would deem appropriate for making the EI determination.

___ If no - (the discharge of "contaminated" groundwater can not be shown to be "**currently acceptable**") - skip to #8 and enter "NO" status code, after documenting currently unacceptable impacts to the surface water body, sediments, and/or eco-systems.

___ If unknown - skip to 8 and enter "IN" status code.

Rationale and Reference(s):

References:
Two chemicals, 1,3 and 1,4-dichlorobenzene remain as a "significant" contaminant since their values are greater than 10 times the screening standard. Concentration tables over time indicate temporary increase (Dec. sampling events) in certain wells (PMW-3D, 4D for1, 4 DCB and PZ1R and PMW-5D for 1, 3 DCB) relative to samples analyzed prior to the Interim Measure operation (see below). We attribute this spike to extreme disequilibrium in the aquifer upon the Interim Measure starting operation. In addition, the volume of contamination found in these wells is of finite mass

owing to the plume being located downgradient of the sparge wells. We therefore anticipate that as additional monitoring well samples are taken the trend will be to lower concentrations. Furthermore, using a source specific mixing zone and a computed contaminant loading to the lake indicates significant dilution is occurring. This estimate uses maximum DCB found in the wells described above, a plume width of 150 feet, and a groundwater gradient and hydraulic conductivity determined during the RFI. This analysis also incorporates additional dynamic physical mixing factors of wave induced lake water mixing in a shallow Lake, localized long shore currents and the geochemically oxidizing condition of groundwater and surface water found at the site. DCB is readily degraded under aerobic conditions such as these.

Significantly, the U.S. EPA, through its Great Lakes National Program Office (GLNPO) funded a study of Lake Macatawa in 2005. Sediment chemistry, solid-phase toxicity, and benthic macroinvertebrates were examined at 13 facilities along the Lake, including the BASF facility. A series of 14 sediment core and 13 PONAR samples were analyzed for heavy metals, semivolatiles, PCBs and physical characteristics. The study concluded that, with the exception of one of the study areas, (Heinz/Petroleum storage), the Probable Effect Concentrations for current sediment quality guidelines were not exceeded.This suggests that from both current and historical perspective, the BASF facility is not contributing significant contamination to the Lake.

In addition to the above study, the Interim Measure (IM) implemented in September 2006 consists of a 350-foot long air sparge curtain containing 35 air sparge wells installed to the base of the aquifer in a staggered line perpendicular to groundwater flow near the property boundary with Lake Macatawa. The operation of the 350-foot wide air sparge curtain constructed perpendicular to groundwater flow across the entire width of impacted groundwater promises to achieve the objective of mitigating the dissolved phase of COI in groundwater and continued operation will remove the adsorbed phase of COI from the 40-Foot Silt before groundwater discharges to Lake Macatawa. As of March 2007, six months after IM operations began, the air sparge curtain has removed approximately 8.6 pounds of COI in shallow (15 to 25 feet below ground surface) groundwater and approximately 3.5 pounds of COI in deep (25 to 35 feet below ground surface) groundwater downgradient of the curtain. The screening levels have been met for all COI in groundwater at shallow, downgradient performance monitoring wells and deep, downgradient well PMW-2D located farthest from OPSA 5, the former settling basins. Results from monitoring well 9D installed in the lower aquifer below the forty foot silt layer (upper confining layer) did not detect any COI. The IM also includes a groundwater extraction well constructed at each end of the air sparge curtain to help provide hydraulic control and prevent groundwater migration laterally around the air sparge curtain. Groundwater recovered by the two extraction wells is treated using an air stripper to remove volatile organics and increase dissolved oxygen levels, then re-injected into four groundwater injection wells installed to the base of the aquifer at the former OCM building. Re-injection of oxygenated groundwater enhances natural biodegradation of COI in groundwater in the upgradient portion of the groundwater plume near the original source area.

It should be noted that while the EI can establish that groundwater discharges are below water quality criteria in the water column due to dilution factors, receptors in the sediment porewater and the transition zone above the sediment may not benefit from the diluting factors discussed above, and may therefore be affected by the groundwater concentrations which are significantly above criteria for chronic exposures. An evaluation of these effects is beyond the scope of an EI but will be included in the ecological risk assessment for the site.

7. Will groundwater **monitoring** / measurement data (and surface water/sediment/ecological data, as necessary) be collected in the future to verify that contaminated groundwater has remained within the horizontal (or vertical, as necessary) dimensions of the "existing area of contaminated groundwater?"

X

If yes - continue after providing or citing documentation for planned activities or future sampling/measurement events. Specifically identify the well/measurement locations which will be tested in the future to verify the expectation (identified in #3) that groundwater

contamination will not be migrating horizontally (or vertically, as necessary) beyond the "existing area of groundwater contamination."
If no - enter "NO" status code in #8.
If unknown - enter "IN" status code in #8.

Rationale and Reference(s): Groundwater monitoring is currently being conducted onsite as part of the IM to monitor the effectiveness of the air sparge curtain. This groundwater monitoring program will be continued in the future as part of the final Corrective Measure. The air sparge system consists of 25 air sparge wells,and a series of piezometers designed to increase dissolved oxygen levels and stimulate biodegradation of COCs. Groundwater extraction rates will be monitored monthly for one year to demonstrate the effectiveness of the system. Sparge system groundwater quality will be monitored for one year at 3 well clusters and 6 piezometers: PMW-2, PMW-3 and PMW-4 and PZ-1 through PZ-6. The results from the evaluations will be compared to 8 existing groundwater monitoring wells. The monitoring program will continue until a final remedy (at which time it will be reassessed) is chosen and the Michigan Part 201 goals will be used to determine success in the corrective action.

References:

ENSR Corporation, Work Plan for RCRA Interim Measure, Former BASF Facility, Holland, MI, February 2006

8. Check the appropriate RCRIS status codes for the Migration of Contaminated Groundwater Under Control EI (event code CA750), and obtain Supervisor (or appropriate Manager) signature and date on the EI determination below (attach appropriate supporting documentation as well as a map of the facility).

X YE _ Yes, "Migration of Contaminated Groundwater Under Control" has been verified. Based on a review of the information contained in this EI determination, it has been determined that the "Migration of Contaminated Groundwater" is "Under Control" at the BASF Corporation Holland, Michigan facility , EPA ID # **MID 006 411 953** , located at 471 Howard Avenue, Holland, Michigan.. Specifically, this determination indicates that the migration of "contaminated" groundwater is under control, and that monitoring will be conducted to confirm that contaminated groundwater remains within the "existing area of contaminated groundwater" This determination will be re-evaluated when the Agency becomes aware of significant changes at the facility.

___ NO - Unacceptable migration of contaminated groundwater is observed or expected.

___ IN - More information is needed to make a determination.

Completed by	(signature)		Date	
	(print)	Jonathan Adenuga		
	(title)			

Supervisor	(signature)		Date	
	(print)	George Hamper		
	(title)			

	(EPA Region or State)		

Locations where References may be found:
USEPA Records Center 77 W. Jackson Chicago, IL. 60605

Contact telephone and e-mail numbers

(name)	Jonathan Adenuga
(phone #)	(312) 886-7954
(e-mail)	adenuga.jonathan@epa.gov