



**BAYER MATERIAL SCIENCE LLC
HICKSVILLE, NEW YORK
Interim Corrective Measure
Additional PCB Soil Removal**

EQ PROJECT APPROACH



PROPOSED PROJECT APPROACH

INTRODUCTION

EQ Northeast, Inc. (EQ) has assembled a Project Team which has the experience and expertise to manage and execute the Fieldwork and Transportation & Disposal as outlined in the Bayer MaterialScience (Bayer) Request For Proposal – Hicksville, New York RCRA Interim Corrective Measure.

EQ, as the Prime Contractor, will perform the Contract Management from its Wrentham, MA office with Mr. David Ciroli as the point of contact (Project Manager) for the Contract. EQ will staff the site with personnel from our offices located in Wrentham, MA; Bayonne, NJ; and Maywood, NJ. EQ has extensive experience performing site remedial actions and providing direct rail transportation for disposal of waste materials. To further strengthen the Project Team, EQ will utilize MHF Logistical Solutions, LLC (MHF) for the rail transportation portion of the contract. EQ has a long standing and successful relationship with MHF and has transported in excess of two million (2,000,000) tons of waste utilizing MHF's services.

Table 1, as shown below, summarizes the Project Staffing and responsibilities.

TABLE 1 – PROJECT STAFFING

COMPANY	WORK CATEGORY	RESPONSIBILITY
EQ Northeast, Inc. (EQ)	Prime Contractor	Project Point of Contact
EQ Northeast, Inc. (EQ)	Civil - Fieldwork	Site Operations, Excavation, Loading of Railcars
Angle of Attack Land Surveying, LLC (AALS)	NY State Licensed Surveyor (Subcontractor)	Civil Survey Work
MHF Logistical Solutions, LLC (MHF)	Rail Transportation (Subcontractor)	Railcar Supply, Transportation
J.N. Giammarino Construction, Inc.	Sheet Piling (Subcontractor)	Design, Installation & Removal of Sheet piling
EQ Northeast, Inc. (EQ)	Disposal	Disposal Coordination

PRIME CONTRACTOR – EQ NORTHEAST, INC. (EQ)

EQ, as the Prime Contractor, will ensure all contractual items are adhered to and will coordinate all Project Activities through the awarded Site Engineer, Arcadis, and Bayer. EQ shall schedule all project activities and coordinate the work to be performed by itself and any subcontractors in such a manner that all work is performed safely, efficiently and in accordance with all project plans and applicable regulations.

PROJECT MANAGEMENT

EQ will work closely with the Site Engineer (Arcadis) to develop and implement a Site Health & Safety Plan and this Project Approach to perform the project activities. The Site Engineer will provide technical and regulatory oversight throughout the duration of the Project. The Site Engineer will provide direct communications to the Bayer representative, Mr. Ramon Simon. As such, all project activities will be recorded and documented on a daily basis for reporting to Bayer and Bayer's Remediation Consultant, Arcadis.



CIVIL – FIELDWORK (SITE OPERATIONS)

EQ will staff the project with EQ's environmental field technicians, EQ operators and specialized subcontractors (licensed sheeting installer, licensed surveyor) to complete the provided scope of work. EQ will provide a full-time, on-site Superintendent to manage the day to day field activities. EQ's Site Superintendent will be Mr. John Akkerman. The Site Superintendent will have the authority to act on behalf of EQ's Project Manager to ensure all daily activities are performed safely and in accordance with the approved Project Schedule. Mr. David Cirolì will be EQ's Project Manager, and will be the single point of contact for all administrative issues. Mr. Akkerman and Mr. Cirolì will interface several times each day to ensure the Project's overall objectives are met.

Project Scheduling / Sequencing

EQ has attached a Project Schedule detailing the proposed sequencing of the Project Activities for the Hicksville ICM Site Work. EQ scheduled the work to allow for multiple site activities to be performed while minimizing the impact of work being performed in one location from interfering with work being performed in another location.

Key elements of the Project Schedule include:

Excavation Areas 10, 11, 12, 14 and 15 will be excavated, stockpiled and sampled for waste characterization prior to beginning excavation in areas that can be direct loaded for transport and disposal. This will allow EQ to excavate and direct load PCB impacted areas that are expected to go to EQ's Wayne Disposal Landfill for TSCA disposal while we await sample results of the stockpiled soils eliminating downtime.

The scheduling of the work activities include real time "lag time" to allow for the sampling and surveying of completed excavations prior to backfilling. Work is scheduled to be performed in multiple locations simultaneously to ensure that the necessary "lag time" to properly close out individual excavations does not prolong the Project Schedule. For example, while excavation and stockpiling the potential RCRA Areas referenced above, EQ will be installing the sheeting in Areas 2 and 3.

Survey Controls

EQ will utilize a NY licensed Surveyor, Angle of Attack Land Surveying, LLC to perform and document a Baseline Site Survey, on-going and completed excavation work and provide final "As-Built" drawings for the work performed. Prior to performing on site activities, EQ's surveyor will perform an initial Site Survey. During the performance of the initial site survey, all areas to be excavated will be identified and marked using flags, stakes and/or spray paint. During site excavation activities, EQ's surveyor will document all final horizontal and vertical excavation limits prior to backfilling each excavation. Upon completion of all site field work, EQ's surveyor will perform a final "As-Built" Survey to document all final site grades.

Site Preparation Activities

Upon mobilization to the project site, EQ will ensure that all utilities have been located and identified by notifying NY One call (#91140955), municipal agencies and working closely with Bayer and Arcadis personnel knowledgeable with the site. An initial (baseline) site survey will be



completed and all excavation areas identified and marked. EQ will install soil erosion controls in accordance with state and local regulations and the project requirements. The erosion controls will include silt fence, hay bales (if necessary) and provide for protection of inlet/outlet stormwater structures and/or drains. Clearing and grubbing of trees and brush located within the work areas will be completed and a truck wash (decontamination) pad set up at a pre-approved location on the site. In addition, at a minimum, two soil staging pads will be erected adjacent to the railroad spur to be used for loading railcars. Arcadis, will setup and establish the necessary perimeter air monitoring stations to be in compliance with the NYS DEC Community Air Monitoring (CAM) Plan.

Site Excavations

EQ will identify via the baseline site survey, exact excavation limits and physically mark out the excavation areas. Upon identifying the specific excavation limits, EQ will install silt fencing around all excavation locations.

Excavation areas, in which soils need to be characterized, will be stockpiled, properly covered with an impervious liner and sampled upon excavation for characterization. These areas include: 10, 11, 12, 14 and 15. The remaining excavation areas will be excavated and direct loaded for rail transportation to their designated disposal facility.

The shallower excavations, 0' – 8' below ground surface, will be excavated utilizing approved sloping and step back techniques to conform to all applicable OSHA regulations. The deeper excavations, Areas 2 and 3 will be sheeted in accordance with a NY Professional Engineer approved and stamped sheeting plan prior to excavation of those areas. EQ will utilize a CAT 330 or equivalent for site excavation operations. Excavation of Areas 2 and 3 will require a JD 450 Excavator fitted with a long stick attachment to reach the maximum 32 foot deep excavation. EQ's Project Schedule identifies the proposed sequencing of the excavation areas.

EQ will berm the edges of the excavation areas, as necessary, to minimize any potential storm water infiltration into the excavation areas in the event of a storm event. In addition, EQ will be prepared to provide a sump and pump within the excavations to remove any free standing water within the excavation. Excavation contact water can be pumped to a Frac-type storage tank after allowing maximum time for natural infiltration into the ground. An equipment decon water decontamination pad will be constructed at the entrance to the site, just inside the New South Street gate.

Upon reaching each excavation's horizontal and vertical limits, EQ will assist Bayer's representative with the collection of any necessary post excavation samples. When Bayer's representative approves each excavation area to be backfilled, EQ shall survey the excavation to document its final horizontal and vertical limits then backfill the excavation utilizing pre-approved backfill.

During excavation operations throughout the site, EQ will take care not to damage the firewater water line that runs through the property. In the event the line is damaged or requires to be moved temporarily during excavation operations, EQ will repair or replace the line, as necessary, to ensure it is in an operable condition upon Project completion.

All activities are documented on Daily Quality Control Reports available to the Client and Engineer. These reports document all personnel on-site, hours worked, equipment utilized, materials received, work performed, wastes shipped and Health and Safety discussions (sample



attached). Also attached are the various rail transport documents which will be used in support of the rail operations.

Backfilling Operations

Backfilling of each excavation area will not proceed until verification of the excavation limits and a final survey of each individual excavation is received and Bayer's representative approves the area as completed and ready for backfill. EQ will only utilize pre-approved backfill materials.

For the shallower excavations, in which open cut sloping and step backs are utilized, EQ shall backfill in one foot lifts and compact each lift to achieve 95% compaction (for offsite borrow), or to the maximum extent achievable for onsite, crushed building materials. EQ will place the backfill with a CAT 330 excavator (or equivalent) and/or a CAT 988 (or equivalent) front end loader. Compaction will be completed utilizing a BO MAG 15 Ton vibratory roller.

For the deeper excavations, Areas 2 and 3, in which sheet pilings will be used, the first twenty (20) feet will be placed in two foot lifts using a CAT 330 excavator (or equivalent). Each lift will be compacted using a tamping device on the excavator arm. Upon completion of the first 20 foot of backfilling, the sheet pilings will be removed and decontaminated. The remaining backfill will be placed with 1 foot lifts and compacted using a BOMAG 10 Ton vibratory roller. All backfilling operations will be to the initial site grade as identified on the baseline site survey.

Railcar Loading Operations

EQ has extensive experience loading, packaging and shipping contaminated soils via direct rail using gondola railcars. As such, EQ intends to ship all outgoing contaminated soils for disposal via direct rail. EQ will line the railcars with a burrito style liner that envelops and completely contains the loaded soils. It will be tied using a series of ropes in a criss-cross manner. EQ will load the soils utilizing a CAT 988 Front End Loader (or equivalent) with a bucket scale attachment. The bucket scale attachment will allow EQ to manage the railcar loaded weight to ensure that no railcars are over loaded. During loading operations of the railcars, EQ will utilize a "catch pad" between the railcars and the Front End loader to ensure that any spilled materials are captured and do not cross contaminate the soils adjacent to the rail tracks. EQ shall load, on average, four to six railcars (4 – 6) per shipping day.

TRANSPORTATION AND DISPOSAL

As per the provided information in the project specifications, EQ intends to transport and dispose of all site soils at its Wayne Disposal TSCA Landfill via direct rail in Belleville, MI. EQ will be prepared to transport the materials via truck or rail to other TSDF facilities if additional waste characterization analytical dictates the need to do so.

Direct Rail Transportation

EQ will provide direct rail transportation utilizing Gondola Railcars with a maximum capacity of 286,000 gross lbs. The railcars can be loaded to a maximum of 263,000 gross lbs per railroad regulations. EQ will subcontract the rail transportation to MHF Logistical Solutions, LLC. EQ has successfully and without incident shipped in excess of 2 million tons of soils and waste



materials with MHF on multiple projects over the last several years. EQ will oversee the loading, packaging, labeling and scheduling of all railcar shipments and provide all shipping documents for the Project. Railcars will be loaded with a Front End Loader with a calibrated bucket scale to ensure the maximum tonnage can be placed in each railcar without exceeding a Gross Railcar weight of 263,000 lbs. During the loading and transportation portions of the Project, EQ will load and ship, on average 4 to 6 railcars per day.

Truck Transportation (Optional)

While EQ intends to ship all soils via direct rail, EQ will be prepared to ship waste materials via truck in the event there are any rail issues (i.e. – rail tracks outside of the Project limits are damaged and cannot be utilized) beyond EQ's control or if the volumes of a particular waste stream precludes rail from being a viable economical option (i.e. – Excavation Area 15 consisting of approximately 20 tons of material is characterized as a Non-Haz Waste which can be disposed at a local Subtitle D Landfill). EQ will utilize properly permitted vehicles prominently displaying required State and Federal stickers (permits). The New York City maximum gross truck vehicle weight of 73, 280 lbs shall be adhered to at all times while transporting soils via truck.

Shipping Documentation

EQ will provide all applicable shipping documents (i.e. – hazardous waste manifests, bills of lading, waybills, LDRs, etc.) that are required for the transportation of the Site's materials being disposed at an approved off-site disposal facility. All waste shipments, rail or truck, will be properly placarded with the codes of the contained waste. In addition, EQ will keep a daily log of all outgoing shipments and will provide daily rail tracking reports identifying each railcar's location and destination.

Disposal

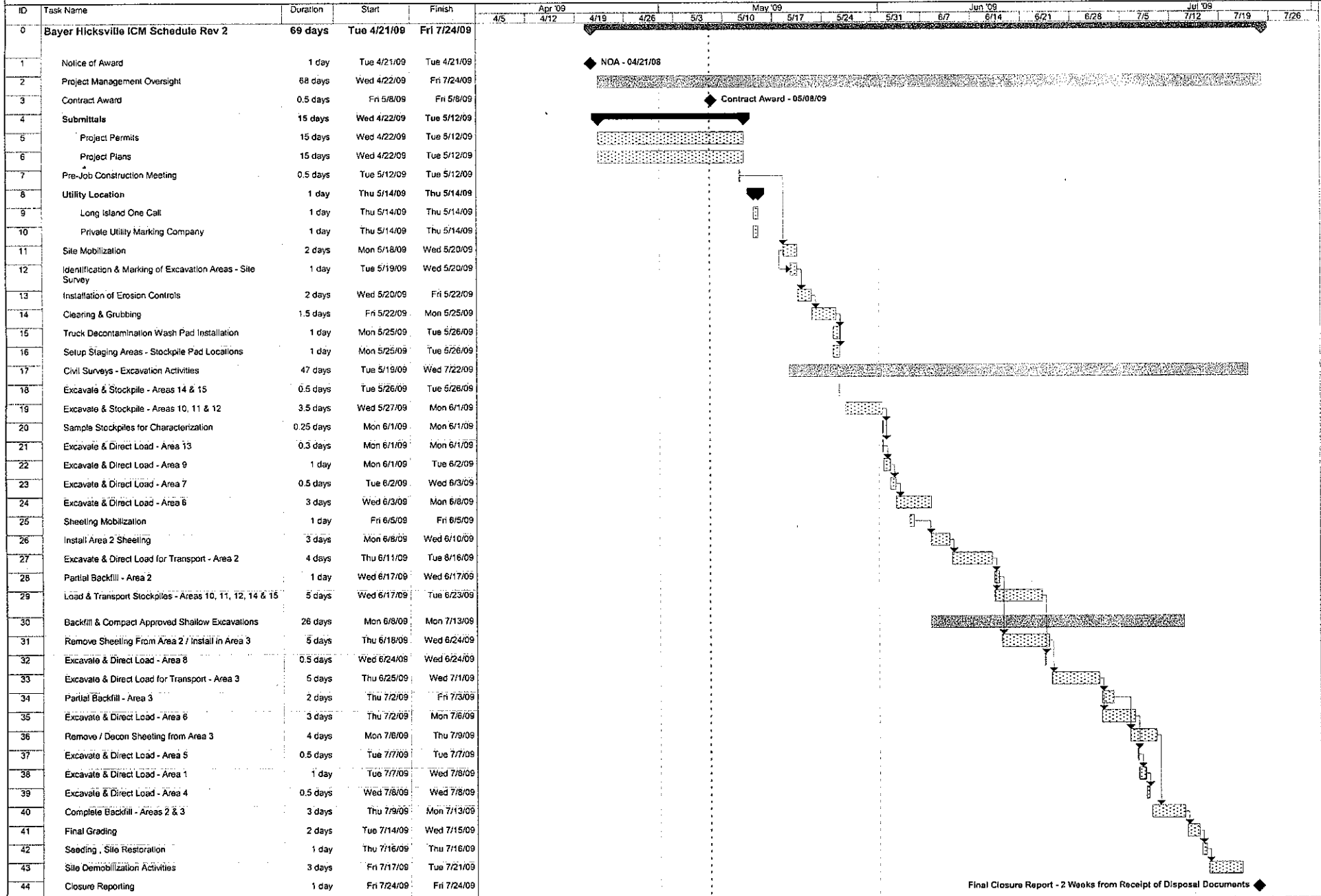
EQ owns and operates a Subtitle C and a TSCA landfill in Belleville, Michigan. EQ proposes to utilize its Wayne Disposal Landfill for the disposal of all TSCA soils removed from the Project Site. EQ has also provided the option to transport and dispose of non-hazardous soils at the BFI – Niagara Allied Waste Facility in Niagara Falls, NY or to transport and dispose (via incineration) of RCRA/TSCA or RCRA Thermal soils at the Clean Harbors Aragonite Incinerator in Utah.

HEALTH AND SAFETY

Health and Safety is a top priority within EQ. As such, all activities will be performed adhering to all Local, State, Federal and Project requirements and regulations. EQ will provide for review and approval, a Project Specific Health & Safety Plan (HASP). No work will be performed on site until the HASP and other applicable plans are approved. All subcontractors will be required to adhere and sign off on the HASP. Dust control measures, to minimize any airborne particulates, will incorporate light water misting of the excavation areas and misting of haul roads (paths of travel) for the on-site heavy equipment. Daily safety meetings will be conducted prior to work activities being performed on site each day. The safety meetings will include discussion on any relevant safety issues at the site and discussion on the work to be performed that day. All safety meeting will be document and included with the Project Reports.

WASTE CHARACTERIZATION

Bayer MaterialScience LLC - Hicksville, New York
Project Schedule - Revision 2



Client: Bayer MaterialScience LLC
Engineer: Arcadis
Contractor: EQ Northeast, Inc.

Task Progress Summary External Tasks Deadline
 Split Milestone Project Summary External Milestone

EQUIPMENT

EQUIPMENT DESCRIPTION	ARRIVAL DATE	HOURS		SAFETY CHECK Y/N
		Off Rent Date	USED TODAY	

MATERIALS RECEIVED

MATERIAL DESCRIPTION	QUANTITY	UNIT	VENDOR

WASTE HANDLING, PROCESSING AND DISPOSAL DATA

MATERIAL SHIPPED TODAY	QUANTITY TODAY	QUANTITY TO DATE	RAILCAR AND MANIFEST NUMBER

AIR MONITORING DISCUSSION

-
-
-

INSTRUCTIONS RECEIVED AND/OR OTHER COMMENTS

-
-

SIGNATURE OF EQ NORTHEAST REPRESENTATIVE

DATE:

John Akkerman

1/0/1900

Bayer Hicksville
 Railcar Shipment Summary Report

RAILCAR NUMBER	Manifest Number	Tare (lbs)	NET TONNAGE	NET POUNDS	Gross Weight (lbs)	DATE ARR Hicksville	DATE LOADED	DATE SHIPPED	TSD Facility	Arrived TSD	Transit time-days	Released TSD	days at TSD	Waste Stream

TOTALS 0 0.00 0
 Average/railcar #DIV/0! #DIV/0!



DATE: _____

**Bayer Hicksville – RCRA ICM Project
Hicksville, NY**

RAILCAR ALLOWABLE NET WEIGHT

A	B	C	D	E	F
Railcar Number	Allowable Gross Weight (LBS)	Listed Tare Weight (LBS)	Allowable Net Weight (LBS)	Allowable Net Weight (Tons)	Actual Load Weight (Tons)
	263,000				
	263,000				
	263,000				
	263,000				
	263,000				
	263,000				
	263,000				
	263,000				
	263,000				
	263,000				
	263,000				

- Column A – Insert Railcar Number (i.e. – JTLX 6606)
- Column B – Allowable Railcar Gross Weight – 263,000 lbs (tare + net weights)
- Column C – Insert Listed Tare Weight as Identified on Railcar (i.e. – 66,700 lbs)
- Column D – Subtract Column C from Column B (i.e. 263,000 – 66,700 for 196,300 lbs)
- Column E – Divide Column D by 2,000 (i.e. - 196,300 lbs / 2,000 is 98.15 Tons)
- Column F – Actual Weight of Soil Placed in Railcar (Bucket Scale)

NOTE: Column D is the allowable net payload authorized for the particular railcar. The payload weight shall consist of the soils loaded into the railcar and the weight of the liner used to package the soils.

Operator Signature _____



**Bayer Material Science – RCRA ICM Project
HICKSVILLE, NY**

Incoming Railcar Inspection QA/QC Form

Railcar Number: _____

Date: _____

Item

Sat / Unsat

Railcar physical integrity is intact (no holes, damage, general appearance is satisfactory)

Railcar is not previously placarded.
If placarded, placards removed and/or defaced.

There is no soil, debris or water within the railcar.

Railcar car markings are readily readable.

Railcar Tare and Load Weight Markings are Visible and readable

Inspected by: _____

Date: _____

Miscellaneous Comments



PRE SHIPMENT RAILCAR QA/QC INSPECTION FORM
BayerMaterial Science – Hicksville, NY – RCRA ICM Project

Railcar Number: _____ **Type** _____

Manifest/Waybill: _____ **Placards**
Number _____ **Required** _____

Date: _____

Item **Sat / Unsat**

All previous placarding, labels or manifests removed or defaced _____

Railcar liners installed and closed in accordance with manufacturer’s
Instructions and DOT requirements. _____

Waste material cannot be accessed from any seam, end or opening _____

Absorbent added if needed _____

Placards applied on all four (4) sides of railcar, if needed _____

No visible leakage of water/waste materials on or from conveyance. _____

Liner ends are properly tucked in and secured as required _____

Liner securing devices are properly secured and aligned across the
load. Devices are tightly secured and locked in as required . _____

No holes are visible in the liner package. _____

COMMENTS:

Inspected by: _____

Date: _____

Reviewed by: _____

Date: _____



BAYER MATERIAL SCIENCE – RCRA ICM PROJECT HICKSVILLE, NY

SHIPPER'S CHECKLIST

Shipment ID Number _____ Date _____
 Railcar Number _____ TSDf _____
 Manifest/Waybill # _____ Net Wgt (tons) _____
 Placard UN/NA # _____ Net Wgt (Kgs) _____
 [net pounds / 2.205]

TASKS:

CIRCLE APPLICABLE ITEM

DOT Placards/Labels applied (Haz Waste)	Yes	No	NA
Waste Manifest/LDR Forms Completed	Yes	No	NA
Emergency Instructions Attached to Manifest	Yes	No	NA
QA/QC Pre-Shipment Inspection Completed	Yes	No	NA
Manifests/BOLS signed by authorized personnel	Yes	No	NA
Shipping Documents Faxed to Required Transporters	Yes	No	NA
Shipping Documents Faxed/Mailed to TSDf	Yes	No	NA
Manifest/Waybills attached to railcar/supplied to railroad	Yes	No	NA
Copies of Shipping Packages made and distributed	Yes	No	NA
Originals Mailed to applicable TSDf	Yes	No	NA

Shipping Documents Completed By: _____

Date Shipments Completed: _____