REPORT

Citizen Participation Plan for the ITT Automotive, Inc. Inactive Hazardous Waste Disposal Site Town of Gates, New York (Site #8-28-112)

ITT Automotive, Inc.

May 2004

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ITT Automotive, Inc.

Steven J. Roland, P.E.
Executive Vice President

May 2004

O'BRIEN & GERE
ENGINEERS, INC.

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1. Introduction and Overview of the Citizen Participation Plan

What is a Citizen Participation Plan?

A Citizen Participation Plan, or CP Plan, provides interested citizens like you with information on how ITT and the New York State Department of Environmental Conservation (NYSDEC) will involve the public during the process of investigating and remediating (cleaning up) a hazardous waste site. The plan identifies information ITT and the State want to communicate to site neighbors as well as information needed from the community. Additionally, the plan is used to track public involvement activities that must be conducted according to state regulations, such as notifying residents when a cleanup plan is selected.

What documents are included in this plan?

- Background information about the site and investigations occurring there;
- Information on planned citizen participation activities (see Section 3.2);
- Locations where you can find more information ("document repositories") and a list of documents available there;
- A glossary of terms and acronyms you may encounter while learning about the site (see Section 7);
- A list of people interested or involved with the site ("Mailing List");
- A copy of the site's page from the state's official list, or registry, of hazardous wastes sites in New York State (see Attachment A); and
- Fact sheets explaining the steps in the investigation and cleanup process (see Attachment B).

The plan is periodically updated to include new fact sheets, additions to the mailing list, or changes in planned citizen participation activities.

If you would like more information on citizen participation activities, contact Lisa LoMaestro Silvestri of the New York State Department of Environmental Conservation at (585) 226-5326.

This document is the site-specific Citizen Participation Plan (CPP) for the Remedial Investigation/Feasibility Study (RI/FS) activities for the ITT Automotive, Inc. site (Site #8-28-112) in the Town of Gates, New York. The Site Page from the New York State Department of Environmental Conservation (NYSDEC) Registry of Inactive Hazardous Waste Disposal Sites is included as Attachment A. The ITT Automotive

(ITT) property, in conjunction with the adjacent former Alliance Metal Stamping and Fabricating (AMSF) property are considered the Site for purposes of the RI/FS and this CPP. A Site location plan is included as Figure 1-1. The RI/FS is being performed pursuant to the Order on Consent (B8-0614-02-05) between the New York State Department of Environmental Conservation (NYSDEC) and ITT Automotive, Inc. dated August 28, 2003 (Consent Order).

The RI/FS will be conducted in accordance with the RI/FS Work Plan, of which this CPP is one component. The field sampling activities will be conducted in accordance with the Field Sampling Plan (FSP). The FSP is provided in Section 4.4 to the RI/FS Work Plan. Attachment B provides Fact Sheets Explaining the Investigation and Cleanup Stages in the Hazardous Waste Site Program.

2. Site Background

2.1. Site Setting

The Site consists of the ITT Automotive, Inc. property located at 30 Pixley Industrial Parkway (Figure 1). This property covers approximately 3 acres of land located in the City of Rochester, Town of Gates, Monroe County, New York. The adjacent former Alliance Metal Stamping and Fabricating (AMSF) property is presently considered an off-site property for purposes of the RI/FS, however due to the distribution of constituents of concern the combined ITT and AMSF properties are included in the scope of work and are presented in figures.

The Site is located approximately 0.75 miles north of the Little Black Creek and 2.25 miles to the southwest of the Erie Canal. The Site is bordered to the north by a large movie theater complex and commercial district, the AMSF property to the east, and commercial district; industrial properties border the Site to the south and west.

2.2. Site History

The original ITT facility was constructed on vacant land in 1973 for Rochester Form Machine. The facility has undergone several expansions since that time. The ITT Automotive, Inc. facility currently consists of a 45,500 square foot one-story building located on approximately three acres of property. Operations at the ITT Automotive, Inc. facility included the manufacture of aluminum components for automotive air conditioning and various general applications that involve drilling and machining, alkali cleaning, tube forming, aluminum brazing and welding.

The original AMSF building was constructed in 1967 and has been expanded on several occasions. Operations at the former AMSF facility included stamping, forming, cleaning, grinding, painting, and deburring metals. The facility also provided machining and tool building services. The property is currently owned by Maguire Family Properties, Inc. The former AMSF building has been expanded and subdivided and is currently used by various tenants for commercial and light industrial activities.

2.3. Environmental Issues Identified at the Site and AMSF Property

The following studies were previously performed at the ITT Property. These studies were completed without NYSDEC review or approval and the NYSDEC does not necessarily endorse the assessments and conclusion. However the previous data will be used to assist in the site evaluation.

Quantitative Environmental Survey at ITT-Higbie Baylock Rochester Form Machine, H2M Group, April 1993.

The objective of the investigation was to evaluate potential impacts to the environment associated with eight areas of potential environmental concern on the ITT property. The investigation consisted of the installation of soil borings and monitoring wells.

Chemical analysis of the soil and ground water included Volatile Organic Compounds (VOCs), total petroleum hydrocarbons (TPHs), pH quantified in soils, and metals.

Results of this investigation indicated that two areas were identified as needing further investigation due to the presence of VOCs including 1,1,1-trichloroethane (TCA) and 1,4-dioxane. These areas are located in the southwest corner and in the northeast corner of the ITT facility, respectively.

Final Report on Ground Water Investigation, ITT Industries, Fluid Handling System, Golder Associates Inc., March 2000.

The objective of this investigation was to further evaluate ground water conditions at the ITT property. The investigation included the installation of five shallow bedrock wells, three deep bedrock wells, and seven overburden soil borings. The report also included a description of the site geology and hydrogeology for the shallow, intermediate, and deep bedrock zones. This description included the characterization of the ground water flow and hydrogeologic regime.

Results of the analytical testing indicated the presence of VOCs in the overburden soil and the ground water beneath the property. The primary VOC of concern was TCA, which was detected in both soil and ground water. The highest concentration of VOCs in the shallow ground water was located in the northeast corner of the ITT facility.

Analytical results from the ground water samples collected from the deep bedrock monitoring wells indicated the presence of VOCs. Results indicated the presence of TCA and 1,1-dichloroethane (1,1-DCA) at or slightly above the ground water standard. Benzene, toluene and xylene (BTX) compounds were also detected in deep bedrock wells. The VOCs

detected in the deep bedrock zone are much lower in concentration than in the shallow bedrock zone.

Results of this investigation indicated that the presence of VOCs in the overburden soils at the ITT facility may be attributed to past operations at the Site and/or from VOCs present in the shallow bedrock ground water. BTX compounds detected in the deep bedrock zone were considered the result of the natural occurrence of these compounds in the bedrock underlying the Site.

Supplemental Subsurface Investigation, Risk Assessment, Natural Attenuation Evaluation and Soil Remediation, ITT Industries, Golder Associates, Inc., May 2000.

Golder Associates conducted a supplemental subsurface investigation, a screening level risk assessment, a natural attenuation evaluation, and soil remediation at the ITT facility. The investigation included the installation of 45 soil borings in the northeast corner of the ITT property and ground water sampling of the existing monitoring wells.

The soil analytical results indicate that TCA and 1,4-dioxane were detected in most of the soil samples. Based on the results of the supplemental soil investigation, a soil remediation plan was designed and executed at the ITT facility. The remediation removed and disposed of soil containing VOCs above the NYSDEC recommended soil cleanup objective. Approximately 968 tons of impacted soils were removed from the northeastern portion of the ITT property.

Ground water samples were collected from the shallow and deep bedrock monitoring wells at the ITT facility and analyzed for natural attenuation parameters. The natural attenuation evaluation provided a strong indication that natural attenuation processes were occurring in the shallow and deep ground water systems at the ITT property.

A screening level risk assessment was also performed to evaluate the potential risk to industrial/commercial site users of the ITT facility. Results indicated that it was unlikely that the current site subsurface conditions would pose a health risk due to exposure to TCA and 1,4-dioxane in the soil and shallow ground water.

Transducer Study, ITT Automotive, Inc., O'Brien & Gere Inc., September 2003

This investigation included ground water head and temperature monitoring at eight monitoring wells and one recharge well on the ITT facility for a period of 33 days. The objective of this study was to evaluate whether the discharge of precipitation runoff into recharge wells on the ITT and the neighboring properties affect ground water elevations and ground water flow patterns.

Results of the investigation showed that the shallow bedrock ground water head beneath the ITT property responded quickly to precipitation

runoff discharge to the site recharge well. The ITT recharge well affected the ground water head and temperature in the shallow bedrock. A sequence in ground water head response also occurred in monitoring wells on the northern portion of the property, which were located at increasing distances from AMSF recharge well RW-2.

In addition, ground water elevations measured at the time of peak head response documents an east to west hydraulic gradient across the northern portion of the ITT property.

The following studies were previously performed at the AMSF Property.

Characterization of Soil and Ground Water Quality at the Alliance Metal Stamping and Fabricating Property, Pixley Industrial Park, Gates, NY, GeoServices Ltd., October 16, 1992.

GeoServices, Ltd. conducted a soil and ground water quality characterization at the AMSF property. Eleven soil borings were completed in the southwestern portion of the site and eight borings were completed in the southern portion of the property.

Analytical results indicated that tetrachloroethene (PCE) and TCA were detected in the soil samples.

Four monitoring wells had been previously installed at the AMSF property in conjunction with a November 1991 environmental site assessment for characterization of ground water flow and quality beneath the subject property. Six monitoring wells and five deep piezometers were constructed during the 1992 investigation in order to characterize ground water flow and VOCs occurrences.

Analytical results indicate that VOCs were present in ground water at each of the locations sampled. TCA and PCE accounted for more than 65 percent of the total VOCs in 13 of the 15 wells sampled. Degradation products of those chlorinated compounds account for the remainder of the VOCs detected. The degradation products account for a greater percentage of the total VOCs in the ground water of the deep piezometers.

Report of June 1993 Site Testing and May 1994 Site Remediation Work, The Alliance Metal Stamping and Fabricating Property, Pixley Industrial Park, Gates, NY, GeoServices Ltd., August 2, 1994.

In 1993 and 1994, GeoServices, Ltd. conducted environmental testing and site remediation work at the AMSF property. Soil samples were collected beneath the depth interval previously tested at a location on the western side of the AMSF property and from the AMSF property hydraulically upgradient of MW-7.

The deeper soil sample results indicated that VOCs were present. The soil samples contained TCA, PCE and 1,1,2-trichloroethane.

Six soil borings were completed at the upgradient location on the property. Analytical results indicated that soils at this upgradient location contained TCA.

Two existing AMSF storm water recharge wells, RW-1 and RW-2, were sampled along with other site monitoring wells. Analytical results indicated that VOCs were detected in many of the monitoring and recharge wells. TCA was the principle VOC detected.

Based on the soil sampling results obtained, a soil excavation/remediation plan was conducted at four locations on the AMSF property in order to remove soil containing relatively elevated VOCs. The locations included two in the area of the southwest corner of the building, the northeast corner of the building, and the south central portion of the property.

Site Investigation Report ITT Automotive Fluid Handling Systems and Former Alliance Metal Stamping and Fabricating, Town of Gates, Monroe County. NYSDEC, December 2001.

The NYSDEC performed this investigation at both the ITT and the AMSF facilities, focusing on the northeast corner of the ITT property and the adjacent northwest corner of the AMSF property.

Field activities consisted of sampling existing monitoring wells, surface and subsurface soils, storm water recharge wells and conducting several rounds of additional ground water sampling.

The NYSDEC report indicated that a consequential amount of hazardous waste, in the form of chlorinated VOCs, has been disposed of at the ITT property and potentially at the AMSF property. Additional compounds, including non-chlorinated VOCs, semivolatile organic compounds (SVOCs), and inorganic compounds were detected exceeding the standards, but the results were not indicative of hazardous waste disposal.

The report recommended that the ITT property and the AMSF property be considered for inclusion in the New York State Listing of Inactive Hazardous Waste Disposal Sites.

3. Project Description

Site investigation tasks, for the RI/FS, will include collection of environmental samples including soil samples, soil gas samples, and ground water samples. Thirty-three soil borings and 12 monitoring wells will be installed as part of this investigation. The environmental samples will be submitted to a New York State certified laboratory for analysis of VOCs, SVOCs, metals, and 1.4-dioxane.

3.1. Upcoming Site Investigation Activities

After NYSDEC determines that the Site has been adequately investigated, NYSDEC, in conjunction with the New York State Department of Health (DOH), will propose a final action plan for the Site. This plan is called a Proposed Remedial Action Plan, or PRAP. This plan will compare different cleanup options that could be taken at the Site and recommend a preferred cleanup option based on a series of criteria, such as short and long-term permanence of the cleanup, cost, and ease of implementation. NYSDEC will solicit public input into the plan.

After considering all comments received, NYSDEC will make a final decision on the cleanup plan and outline the decision in a document called a Record of Decision, or ROD. NYSDEC will include responses to comments they receive from citizens in an appendix in the Record of Decision. More details about the citizen participation activities that will take place during the investigation and selection of a cleanup plan can be found in the next section of this Citizen Participation Plan.

3.2. Description of Specific Citizen Participation Activities

NYSDEC is committed to keeping the public informed and involved throughout the process of investigating and remediating the ITT Automotive, Inc. Site. As such, the NYSDEC requires several citizen participation activities. Table 1 describes the citizen participation activities that will take place during the RI/FS and evaluation of a cleanup plan for the ITT Automotive, Inc. Site.

Some citizen participation activities may be performed by the NYSDEC, and some may be performed by ITT Automotive, Inc. The project managers will use Table 1 to track required citizen participation activities for the ITT Automotive, Inc Site.

3.3. Project Schedule

A preliminary project schedule has been established for the RI/FS activities. The preliminary schedule is provided on Figure 6 of the RI/FS Work Plan.

4. Project Contacts

For more information about this project, please contact the following persons:

Environmental Concerns

Mr. Frank Sowers, P.E.
Division of Environmental Remediation
NYSDEC – Region 8
6274 East Avon-Lima Road
Avon, New York 14414
(585) 226-5357

Health Related Concerns

Ms. Deborah McNaughton
NY State Dept. of Health
335 East Main Street
Rochester, New York 14604
(585) 423-8069

Citizen Participation

Ms. Lisa LoMaestro Silvestri – Citizen Participation Specialist
NYSDEC – Region 8
6724 East Avon-Lima Road
Avon, New York 14414
(585) 226-5326

5. Public Mailing List

A mailing list is used to provide information to area residents, elected officials, media and other interested parties who want to be kept informed about the ITT Automotive, Inc. site. The public mailing list is included as Table 2.

6. Identification of Document Repositories

Documents related to the ITT Automotive, Inc. site will be available for public review at the locations listed below. As additional documents are created during the remediation process, they will be added to the repositories.

Gates Public Library
1605 Buffalo Road
Rochester, New York 14624
(585) 247-6446
Hours of Operation: M-F: 10am – 9pm
Sat: 10am – 5pm
Sun: Closed

NYSDEC
Region 8 Offices
6724 East Avon-Lima Road
Avon, New York 14414
(585) 226-5326
Contact: Ms. Lisa LoMaestro Silvestri – Citizen Participation Specialist
Hours of Operation: Mon-F: 8:30am-4:45pm
(by appointment only)

7. Glossary of Key Terms and Major Program Elements

This glossary defines terms associated with New York's hazardous waste site citizen participation program, and important elements of the hazardous waste site remedial program. Words in **bold** in the definitions are defined elsewhere in the glossary. A list of acronyms often used in the remedial program is presented at the end of this section.

Administrative Record
Part of a site's **Record of Decision** that lists and defines documents used in the development of NYSDEC's decision about selection of a remedial action.

Availability Session
A scheduled gathering of program staff and members of the public in a casual setting, without a formal presentation or agenda but usually focusing on a specific aspect of a site's remedial process.

Citizen Participation
A program of planning and activities to encourage communication among people affected by or interested in hazardous waste sites and the government agencies responsible for investigating and remediating them.

Citizen Participation (CP) Record
A document prepared at a major remedial stage that describes the citizen participation activities required at that stage. A CP Record also directs a scoping process to determine if additional citizen participation activities are appropriate and feasible.

Citizen Participation Specialist
A staff member from a NYSDEC central office or regional office who has specialized training and experience to assist a **project manager** and other staff to plan, conduct and evaluate a site-specific citizen participation program.

Classification
A process to place a hazardous waste site within a category which defines its hazardous waste status and its threat or potential threat to public health and the environment. Sites are listed along with their classification in the **Registry of Inactive Hazardous Waste Disposal Sites**.

- **Class 1** – causing or representing an imminent danger of causing irreversible or irreparable damage to public health or environment – immediate action required.

- **Class 2** – significant threat to public health or environment – action required.
- **Class 2a** – temporary classification assigned to a site for which there is inadequate or insufficient data for inclusion in any other classification.
- **Class 3** – does not present a significant threat to public health or environment – action may be deferred.
- **Class 4** – site properly closed – requires continued management.
- **Class 5** – site properly closed – no further action required.
- **Delisted** – site no longer considered an inactive hazardous waste disposal site.

Comment Period
A time period for the public to review and comment about various documents and **Division of Environmental Remediation (DER)** actions. For example, a 30-day comment period is provided when DER issues a **Proposed Remedial Action Plan (PRAP)**, and when DER proposes to **delist** a site from the **Registry of Inactive Hazardous Waste Disposal Sites.**

Consent Order
A legal and enforceable agreement negotiated between NYSDEC and a **responsible party**. The order sets forth agreed upon terms by which a responsible party will undertake site investigation and/or cleanup, or pay for the costs of those activities. The order includes a description of the remedial actions to be taken by the responsible party with NYSDEC oversight, and a schedule for implementation.

Contact List
Names, addresses and/or telephone numbers of individuals, groups, organizations, government officials and media affected by or interested in a particular hazardous waste site. The size of a contact list and the categories included are influenced by population density, degree of interest in a site, the stage of the remedial process and other factors. It is an important tool needed to conduct outreach activities.

Delist
Action by which DER removes a hazardous waste site from the **Registry of Inactive Hazardous Waste Disposal Sites** upon determination that: the site contains inconsequential amounts of hazardous wastes; or that a remediated site no longer requires **Operation and Maintenance.** A proposal to delist a site triggers a public notification and **comment period** process.

Division of Environmental Enforcement (DEE)
A unit within NYSDEC that works with the **Division of Environmental Remediation** and others to negotiate with **responsible parties** to achieve agreements for the investigation and remediation of hazardous waste sites. A negotiated agreement is contained in a **consent order**.

Division of Environmental Remediation (DER)
Formerly the **Division of Hazardous Waste Remediation**, a major program unit within NYSDEC created to manage the hazardous waste site remedial program from site discovery through **Operation and Maintenance** activities. Staff include: engineers, geologists, chemists, attorneys, citizen participation specialists, environmental program specialists and support staff.

Division of Hazardous Waste Remediation
(See **Division of Environmental Remediation**.)

Document Repository
A file of documents pertaining to a site's remedial and citizen participation programs which is made available for public review. The file generally is maintained in a public building near the hazardous waste site to provide access at times and a location convenient to the public.

Enforcement
NYSDEC's effort, through legal action if necessary, to compel a **responsible party** to perform or pay for site remedial activities. NYSDEC may perform this effort by itself or in concert with other agencies.

Environmental Quality Bond Act (EQBA)
The 1986 Environmental Quality Bond Act which gives New York State bonding authority of up to $1.2 billion to fund the State's share of the total cost of remediating hazardous waste sites in New York State.

Fact Sheet
A written discussion about part or all of a site's remedial process, prepared and provided by DER to the public. A fact sheet may focus on: a particular element of the site's remedial program; opportunities for public involvement; availability of a report or other information, or announcement of a **public meeting** or **comment period**. A fact sheet may be mailed to all or part of a site's **contact list**, distributed at meetings, placed in a **document repository** and/or sent on an "as requested" basis.

Interim Remedial Measure (IRM)
A discrete action which can be conducted at a site relatively quickly to reduce the risk to people's health and the environment from a well-defined hazardous waste problem. Examples of IRMs include removing contaminated soil and drums, providing alternative water supplies or securing a site to prevent access.

National Priorities List
The U.S. Environmental Protection Agency's list of the most serious uncontrolled or abandoned hazardous waste sites identified for possible long-term remedial response using money from a special trust fund.

New York State Department of Health
Agency within the executive branch of New York State government which: performs health-related inspections at suspected hazardous waste sites; conducts health assessments to determine potential risk from environmental exposure; reviews Risk Assessments prepared during the

Remedial Investigation and Feasibility Study; conducts health-related community outreach around sites; and reviews remedial actions to assure that public health concerns are adequately addressed.

New York State Department of Law
Agency within the executive branch of New York State government that takes the lead on hazardous waste sites requiring civil enforcement through court action. Litigation can involve negotiations and court action with **responsible parties** to clean up sites; natural resource damage claims, and recovery of remedial costs.

New York State Registry of Inactive Hazardous Waste Disposal Sites
The "Registry." A document that NYSDEC is directed by law to maintain and that lists and provides information about every hazardous waste site in New York State that meets criteria established through a definition of hazardous waste and **classification** system.

Operable Unit
A discrete part of an entire site that produces a release, threat of release, or pathway of exposure. An Operable Unit can receive specific investigation, and a particular remedy may be proposed. A **Record of Decision** is prepared for each Operable Unit.

Operation and Maintenance
A period in which remedial action may be conducted following construction at a site (for example, operation of a "pump and treat" system), or which is performed after a remedial action to assure its continued effectiveness and protection of people's health and the environment. Activities can include site inspections, well monitoring and other sampling.

Preliminary Site Assessment (PSA)
A PSA is DER's first investigation of a site. A PSA is performed to determine if a site meets New York State's definition of an inactive hazardous waste disposal site by confirming the presence of hazardous waste and determining if the site poses a significant threat to public health or the environment.

Project Manager
A NYSDEC staff member within the DER (usually an engineer, geologist or hydrogeologist) responsible for the day-to-day administration of remedial activities at, and ultimate disposition of, a hazardous waste site. The Project Manager works with legal, health, **citizen participation** and other staff to accomplish site-related goals and objectives.

Proposed Remedial Action Plan (PRAP)
An analysis by DER of each alternative considered for the remediation of a hazardous waste site and a rationale for selection of the alternative it recommends. The PRAP is created based on information developed during the site's **Remedial Investigation and Feasibility Study**. The PRAP is reviewed by the public and other state agencies.

Public Meeting
A scheduled gathering of DER staff with the affected/interested public to give and receive information, ask questions and discuss concerns about a site's remedial program. Staff from other NYSDEC divisions, legal and health staff, and staff from consultants and a responsible party often also attend. A public meeting, unlike an **availability session**, generally features a formal presentation and a detailed agenda.

Reclassification
A process by which DER redefines the threat posed by a hazardous waste site to public health and the environment by developing and assessing site information and, based on findings and conclusions, assigning a new **classification** code.

Record of Decision (ROD)
A document that provides a definitive record of the cleanup alternative that will be used to remediate a hazardous waste site. The ROD is based on information and analyses developed during the **Remedial Investigation/Feasibility Study** and the public comment.

Remedial Alternatives Report (RAR)
A report that contains an evaluation of options for the remediation of any contamination in, on, or under, or emanating from, a property that includes an analysis of data and other information concerning the nature and extent of that property's contamination and is generally performed concurrently, and in an interactive fashion, with the site investigation.

Remedial Construction
The physical development, assembly and implementation of the remedial alternative selected to remediate a site. Construction follows the **Remedial Design** stage of a site's remedial program.

Remedial Design
The process following finalization of a **Record of Decision** in which plans and specifications are developed for the **Remedial Construction** of the alternative selected to remediate a site.

Remedial Investigation/Feasibility Study (RI/FS)
The RI fully defines and characterizes the type and extent of hazardous waste contamination at the site. The FS, which may be conducted during or after the RI, uses information developed during the RI to develop alternative remedial actions to eliminate or reduce the threat of hazardous waste contamination to public health and the environment.

Responsible Party
An individual or business who: currently owns or operates a hazardous waste site; or historically owned or operated a site when hazardous waste was disposed; or generated hazardous waste at a site; or transported hazardous waste to a site.

Responsiveness Summary
A written summary of major oral and written comments received by DER during a **comment period** about key elements of a site's remedial program, such as a **Proposed Remedial Action Plan**, and DER's response to those comments.

Site Investigation (SI)
A process undertaken to determine the nature and extent of contamination in, on, under, and emanating from a property. The **SI** includes the gathering of sufficient information to determine the necessity for, and the selection of the appropriate method of, remediation of contamination in, on, under, or emanating from a property.

Site Issues And Community Profile Scoping Sheet
A document prepared to support each **Citizen Participation Record**. Each Scoping Sheet identifies issues and information important to the DER and the community and information that needs to be exchanged at a particular remedial stage. The Scoping Sheet also summarizes information about the surrounding community, including demographics, special needs, etc.

Superfund
The common name for the Federal program established by the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended in 1986. The Superfund law authorizes the U.S. Environmental Protection Agency to investigate and clean up sites nominated to the **National Priorities List**.

Title 3 Project
Remediation of a municipally owned site through the State Superfund Title 3 Program whereby New York State pays 75 percent of eligible costs for remediation and the municipality pays 25 percent.

Acronyms

AG	New York State Attorney General's Office
ARAR	Applicable or Relevant and Appropriate Requirement
C&D	Construction and Debris
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act of 1980
CO	Consent Order
CP	Citizen Participation
CPP	Citizen Participation Plan
CPS	Citizen Participation Specialist

CQC/CQA	Construction Quality Control/Construction Quality Assurance
DEE	Division of Environmental Enforcement
DER	Division of Environmental Remediation, formerly the Division of Hazardous Waste Remediation
DHWR	Division of Hazardous Waste Remediation, now the Division of Environmental Remediation
DOD	Department of Defense
DOL	Department of Law
DOW	Division of Water
ENB	Environmental Notice Bulletin
EQBA	1986 Environmental Quality Bond Act
EPA	Environmental Protection Agency
F&W	Division of Fish and Wildlife
FDA	Food and Drug Administration
FSF	Federal Superfund
FOIL	Freedom of Information Law
FS	Feasibility Study
FY	Fiscal Year
GPM	Gallons Per Minute
HeLP	Health Liaison Program
IRM	Interim Remedial Measure
mg/kg	milligrams per kilogram
NPL	National Priorities List
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
O&M	Operation and Maintenance
OSHA	Occupational Safety and Health Administration
OU	Operable Unit
PAH	Polynuclear Aromatic Hydrocarbon
PCB	Polychlorinated Biphenyl
PM	Project Manager
ppm/ppb/ppt	parts per million/parts per billion/parts per trillion
PRAP	Proposed Remedial Action Plan
PRP	Potentially Responsible Party
PRS	Priority Ranking System
PSA	Preliminary Site Assessment
QA/QC	Quality Assurance/Quality Control
RA	Remedial Action
RCRA	Resource Conservation and Recovery Act
RD	Remedial Design
RFP	Request for Proposals
RHWRE	Regional Hazardous Waste Remediation Engineer
RI	Remedial Investigation
RI/FS	Remedial Investigation/Feasibility Study
ROD	Record of Decision
RP	Responsible Party
SSF	State Superfund
SVOC	Semi-Volatile Organic Compound
TAGM	Technical and Administrative Guidance Memorandum
TCLP	Toxicity Characteristic Leading Procedure

TSDF	Treatment, Storage and Disposal Facility
ug/l	micrograms per liter
USGS	U.S. Geological Service
VCP	Voluntary Cleanup Program
VOC	Volatile Organic Compound

Citizen Participation Plan
ITT Automotive, Inc.
Town of Gates, NY

Table 1 *Citizen Participation Activities*

Activity:	Activity will occur at this point in the investigation/cleanup:	The activity is scheduled to be completed:	The activity was completed:
Set up Document Repositories, where citizens can review site-related documents, at the regional DEC office and a public location near the site	Before start of the remedial investigation		
Create a list of people ("Mailing List") interested in the site, including residents, government representatives, media, and any interested civic, environmental or business groups	Before the remedial investigation starts		
Create a Citizen Participation Plan and place it in Document Repositories	Before the remedial investigation starts		
Mail a fact sheet to the Mailing List describing activities proposed for the site	At the start of the remedial investigation		
Mail a fact sheet to the Mailing List describing results of the investigation	When the remedial investigation is complete		
NYSDEC will mail a fact sheet to the Mailing List describing the Proposed Remedial Action Plan (PRAP) and announcing a 30 day comment period	After all investigations are completed and the PRAP is written		
Allow the public 30 days to comment on the proposed clean up plan (PRAP)	After fact sheet announcing the PRAP is mailed		
NYSDEC will hold a public meeting to discuss the PRAP and gather public comments	During the 30- day public comment period		
NYSDEC will mail a fact sheet to the Mailing List describing the selected remedy. NYSDEC will place the "Record of Decision," which outlines the final remedy, at the document repositories. The Record of Decision will include responses to significant comments received during the comment period. (These responses will appear as an appendix called a "Responsiveness Summary.")	When the Record of Decision is signed.		

Citizen Participation Plan
ITT Automotive, Inc.
Town of Gates, NY

Table 2 ***Mailing List***

MEDIA

NEWS DIRECTOR
WROC-TV 8
201 HUMBOLDT ST
ROCHESTER NY 14610

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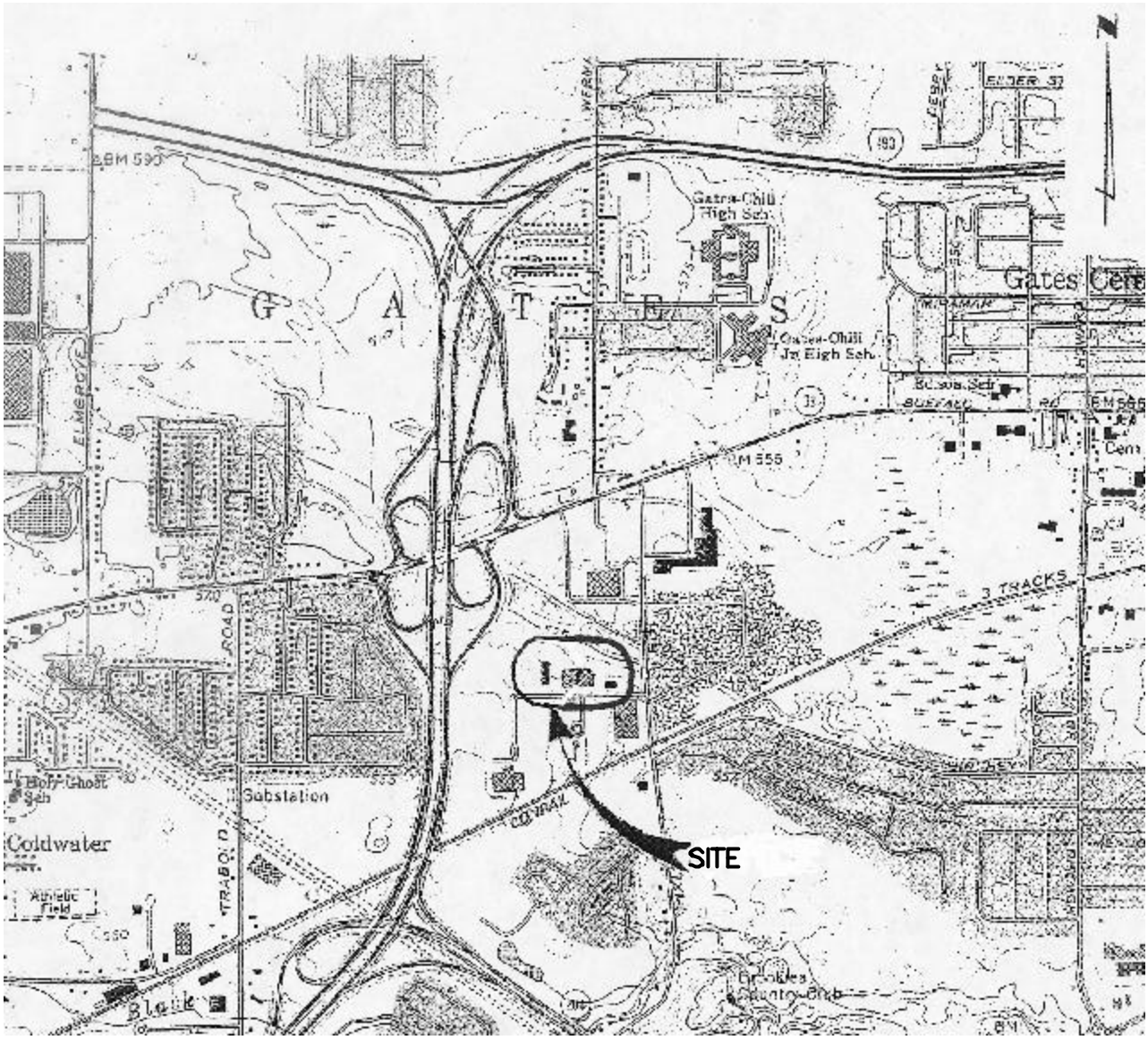
FIGURE 1



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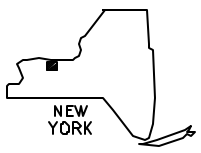
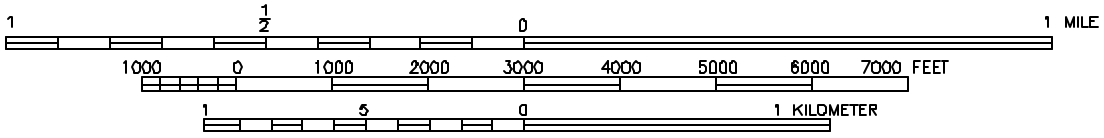


QUADRANGLE LOCATION

ITT AUTOMOTIVE INC.
TOWN OF GATES, N.Y.

SITE LOCATION MAP

SITE #8-28-112



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ENGINEERS INC.

PLOT DATE: 10/28/03

Appendix A

Site Page from NYSDEC's Registry of Inactive Hazardous Waste Disposal Sites

Inactive Hazardous Waste Disposal Report

April 1, 2003

Site Name: ITT Automotive Fluid Handling Systems — **Site Code:** 828112
Class Code: 2 — Region: 8 — County: Monroe — EPA Id: NYD002215184
Address: 30 Pixley Industrial Parkway / Rochester, NY 14624 (Locality: Gates)
Latitude: 43° 8' 29" — Longitude: 77° 42' 51"
Site Type: Structure — Estimated Size: 3 Acres

Site Owner / Operator Information:
Current Owner(s) Name: ITT Industries
Current Owner(s) Address: 30 Pixley Industrial Parkway / Rochester, NY 14624
Owner(s) during disposal: ITT Industries
Operator(s) during disposal: Rochester Machine
Stated Operator(s) Address: 30 Pixley Industrial Parkway / Rochester, NY 14624
Hazardous Waste Disposal Period: From: 1984 To: 1993

Site Description:
ITT Automotive Fluid Handling System (ITT) is located in a commercial/light industrial section in the Town of Gates, Monroe County. There are no known private or public drinking water wells within 0.5 miles of the site. The site was formerly known as Rochester Form Machine, Inc. until 1994. ITT also owned and operated Rochester Form Machine where aluminum parts were produced using operations which included degreasing. 1,1,1-Trichloroethane (TCA) was used as a degreaser. Between 1984 and 1987, seven above ground TCA storage tanks were installed at the site. By the end of 1993, TCA was no longer used at the site. In 1991, ITT performed an environmental investigation at the site. The NYSDEC was not aware of the 1991 investigation until 1998 when the NYSDEC initiated its own site investigation. TCA was the primary organic compound detected during the 1991 investigation. The highest soil concentrations of TCA were detected outside the ITT building in the northeast corner of the ITT property in an area where steam cleaning operations were reportedly performed. The southwest corner of the property was also identified as an area of concern. In response to the 1998 NYSDEC site investigation, ITT initiated their own environmental investigation in 1999. The 1999 ITT investigation, performed without NYSDEC review, approval or oversight, indicated the widespread presence of TCA in the overburden at the northeast corner of the ITT property. Based on these results, ITT excavated 968 tons of soil from the northeast corner of their property. Additionally, the 1999 ITT investigation indicated TCA contaminated soils were present under the ITT building. Soils under the ITT building were not included in the soil removal. Groundwater sampling performed by the NYSDEC approximately 1 year after ITT's soil removal activities, indicated the presence of 1,1-dichloroethane contaminated groundwater in the southwest corner of the site and the continued presence of TCA contaminated groundwater at the northeast corner of the site and an adjacent off-site property.

Confirmed Hazardous Waste Disposal:
1,1,1-trichloroethane (F001 Waste)

Quantity:
unknown

Analytical Data Available for: Groundwater Soil
Applicable Standards Exceeded in: Groundwater
Geotechnical Information:
Soil/Rock Type: Silt-rich clay mixed with sand and gravel.
Depth to Groundwater: Range: 5 to 15 feet.

Legal Action: Type: — Status:
Remedial Action: — Nature of action:

Assessment of Environmental Problems:
Soil at the site is contaminated by chlorinated chemicals at levels exceeding TAGM 4046 recommended soil cleanup values. Groundwater at the site and at an adjacent downgradient property is contaminated by chlorinated chemicals at levels exceeding the 6 NYCRR Part 703 standards. The presence of dense non-aqueous phase liquids (DNAPLs) are also likely based on the high concentrations of chlorinated chemicals in the groundwater.

Assessment of Health Problems:
Exposures through drinking water are not expected because public water serves the area and there are no known drinking water wells in the vicinity. A site investigation at this site will further characterize the nature and extent of contamination and help to evaluate the potential pathways of human exposure.

Fact Sheets Explaining the Investigation and Cleanup Stages in the Hazardous Waste Site Program

New York State Department of
Environmental Conservation

Fact Sheet Preliminary Site Assessment (PSA)

More information from this division:

Division of Environmental Remediation
More Remediation Fact Sheets

The Department of Environmental Conservation (DEC), along with the Departments of Health (DOH) and Law (DOL), is responsible for ensuring the cleanup of inactive hazardous waste disposal sites across the state. Under New York State's Inactive Hazardous Waste Disposal Site Remedial Program, the process begins with the discovery of a potential hazardous waste site and follows a path of thorough investigation, remedy selection, design, construction and monitoring. This fact sheet highlights one stage in the comprehensive process, the ***Preliminary Site Assessment (PSA).***

DEC carries out a PSA to determine whether a site is a hazardous waste site, as defined by state law.

A Preliminary Site Assessment (PSA) is DEC's first investigation of a site where hazardous waste has or may have been disposed of illegally or improperly. The goal of the PSA is to determine whether a site meets the state's definition of a hazardous waste site by confirming the presence of hazardous waste and determining if the site poses a significant threat to public health or the environment. The PSA is performed by DEC or the potentially responsible party under DEC's oversight.

The PSA is a three-step investigation to determine if the site should be classified for remediation or delisted.

The PSA has three steps that combine the former Phase I and Phase II investigations:

1. **Records Search:** a thorough background review and record check into the past use and disposal activity at the site.
2. **Sampling/Surveys:** sampling of exposed wastes, drums, surrounding soil and surface water, performing geophysical and soil gas surveys.
3. **Groundwater Monitoring:** installing monitoring wells and analyzing water samples to check for subsurface contamination.

DEC evaluates PSA information to classify or delist a site.

Each PSA step ends with a decision point that can lead to one of two outcomes.

- If the presence of hazardous waste and the degree of health or environmental threat can be documented, a site is *classified* to:
  - Class 1 (imminent danger)
  - Class 2 (significant threat)
  - Class 3 (no significant threat)
- If hazardous waste cannot be documented, a site is *delisted*.

Built-in decision points help move sites through the remedial process.

The decision points allow DEC to classify or delist the site as soon as enough information exists to support or refute the state's criteria for defining a hazardous waste site. They provide a mechanism to move sites into remediation at the earliest opportunity. If DEC does not have enough information to make the decision to classify or delist, the PSA continues to the next step.

Complex sites may require all three PSA steps.

At complex sites where hazardous waste is difficult to confirm or where significant threat is difficult to determine, all three PSA steps may be required before DEC makes a decision to classify or delist.

The PSA concludes with a decision to classify or delist a site.

DEC reviews the documentation and makes a decision supported by input from local government agencies, the Department of Health (DOH), DEC regional offices and the public. The PSA ends when a site is classified or delisted.

DOH plays an important role in the investigation of hazardous waste sites.

DOH participates with DEC in the PSA process. Through its own early site investigation and health assessment, DOH identifies potential impacts on public health. DEC incorporates DOH information into the PSA to ensure that public health concerns are fully investigated. DOH also helps DEC identify priority sites, reviews work plans and reports and contributes to the decisions to classify or delist a site.

DEC prioritizes sites for further investigation and remediation.

Once DEC decides a site needs remediation based on the PSA findings, the site is ranked for further remedial investigation using the state's Priority Ranking System. DEC uses this system to first focus remedial and enforcement resources on the most serious problems.

Further study and cleanup may follow a PSA.

Sites that become Class 1 or 2 move to the next stage of the remedial process - the Remedial Investigation/Feasibility Study (RI/FS). During a RI/FS, the full nature and extent of contamination is defined. Sites may also be referred for Interim Remedial Measures (early cleanup actions that may not require a full-scale investigation and design). Delisted sites are removed from the registry. Some delisted sites may then be referred to other DEC programs or the Attorney General for action (e.g., closing construction and demolition debris sites or municipal landfills).

DEC can nominate a site for federal cleanup based on PSA findings.

Information collected during the PSA can also help DEC decide if a site should be nominated for the U.S. Environmental Protection Agency's National Priorities List (NPL). NPL site remediations may be paid for by the federal Superfund.

Preliminary Site Assessment Steps/Outcomes

- **Records Search:** background review to document previous disposal practices and activities. Information that describes how the waste was handled, stored, transported and disposed of comes from a wide variety of sources including: industry disposal records, site inspections, local or county investigations and interviews with local haulers, nearby residents and others who may have witnessed activities at a site.
  - ***Decision Point*** *- delist or classify and stop the PSA, or continue to the next step.*

- **Sampling/Surveys:** conduct surficial environmental sampling (surface water, soil, waste piles, drums, etc.) and geophysical/soil gas surveys. Samples are sent to laboratories for analyses.
  - ***Decision Point*** *- delist or classify and stop the PSA or continue to the next step.*

- **Groundwater Monitoring:** install and sample monitoring wells to determine if groundwater is contaminated; may conduct additional surficial sampling.
  - ***Decision Point*** *- delist or classify.*

For More Information

About Preliminary Site Assessments, contact the:

Bureau of Hazardous Site Control
Division of Environmental Remediation
625 Broadway, Albany, NY 12233-7014
telephone (518) 402-9551

For general questions about the Inactive Hazardous Waste Disposal Site Remedial Program, call DEC's 24-hour toll-free environmental remediation information line at **1 (800) 342-9296.**

For questions about the health impacts of hazardous waste sites, contact the Department of Health's Outreach Program at **1 (800) 458-1158.**
Fact Sheets produced by the
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New York State Departments of Health and Law.

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New York State Department of
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Fact Sheet Remedial Investigation/Feasibility Study (RI/FS)

More information from this division:

Division of Environmental Remediation
More Remediation Fact Sheets

The Department of Environmental Conservation (DEC), along with the Departments of Health (DOH) and Law (DOL), is responsible for ensuring the cleanup of inactive hazardous waste disposal sites across the state. Under New York State's Inactive Hazardous Waste Disposal Site Remedial Program, the process begins with the discovery of a potential hazardous waste site and follows a path of thorough investigation, remedy selection, design, construction and monitoring. This fact sheet highlights one stage in the comprehensive process, the **Remedial Investigation/Feasibility Study (RI/FS)**.

RI/FS begins when hazardous waste contamination is confirmed.

The RI/FS follows preliminary site investigations by DEC and DOH that verify hazardous wastes are present and that the wastes pose a significant threat to public health and the environment.

DEC and DOH gather detailed site information to work toward an effective remedial action.

DEC's Division of Environmental Remediation or the responsible party under an enforceable consent order carries out a Remedial Investigation (RI) to determine the nature and extent of contamination. DEC, along with DOH, uses the RI information to then perform a Feasibility Study (FS) that evaluates possible remedies. The FS becomes the basis for selection of a remedy that effectively eliminates the threat posed by contaminants at the site. The RI/FS results in a Record of Decision (ROD) describing the cleanup that will be carried out and documents the decisions that led to the chosen remedy.

The state initiates a variety of activities to inform and involve the public during the remedial process.

Throughout the remedial process, the state encourages public involvement. The public plays a key role in the RI/FS to help shape the remedy selection process.

Public meetings, newsletters, fact sheets, and project documents contribute to the exchange of information and provide opportunity for comment.

The state achieves successful hazardous waste remediation with the cooperation of many groups.

State engineers, geologists, chemists, and health specialists work with consultants, contractors, municipalities, potentially responsible parties, and citizens to investigate the contamination and select an appropriate remedy. The RI/FS process requires a detailed examination of a site to fully understand its impact on public health and the environment before deciding on a remedy. The process can take up to two years to complete.

The sections below describe how the state reaches a decision on a remedy.

Remedial Investigation (RI)

The RI defines the threat to public health and the environment.

The responsible party or DEC performs an RI at each Class 2 inactive hazardous waste disposal site after preliminary investigations have shown that contaminants pose a significant threat to public health or the environment. Through extensive sampling and laboratory analyses, the RI identifies the length, depth and width of contamination, defines the pathways of migration and measures the degree of contamination in surface water, groundwater, soils, air, plants, and animals. Information gathered during the RI fully describes the hazardous waste problem at the site so that the appropriate remedy can be selected.

DOH evaluates ways people may be exposed to hazardous waste.

DOH reviews and recommends activities that will be performed during the RI to ensure that a complete picture of potential health impacts is understood. Such activities include identifying the ways contamination can reach people, either through direct contact, eating, drinking, or breathing.

Feasibility Study (FS)

Remedial action choices are developed during the FS.

The Feasibility Study uses RI information to develop alternative remedies that will eliminate the threat to public health or the environment posed by the site. Wherever feasible, the state selects a remedy that permanently reduces or eliminates the contamination.

The state evaluates the remedial alternatives to reach a balanced decision that protects people and the environment.

The responsible party and DEC screen each alternative to make sure the remedy is

technically suitable for the site. Following the initial screening, DEC and DOH weigh the remaining alternatives against a number of other conditions, including:

- overall protection of public health and the environment;
- reduction in toxicity, mobility and volume of hazardous waste (e.g., by thermal destruction, biological or chemical treatments or containment wall construction);
- long-term effectiveness and permanence;
- short-term effectiveness and potential impacts during remediation;
- implementation and technical reliability;
- compliance with statutory requirements;
- community acceptance; and
- cost.

DEC prepares the proposed remedial action plan for public comment.

The outcome of the selection process is the recommendation of a remedy that best satisfies a combination of these conditions. The remedy becomes part of a proposal that is presented to the public for comment.

Proposed Remedial Action Plan and Public Comment

The state presents the proposed remedial action plan to the public.

After the RI/FS is completed, DEC and DOH hold a public meeting to propose the remedial solution. The Proposed Remedial Action Plan (PRAP) summarizes the decision that led to the recommended remedial action by discussing each alternative and the reasons for choosing or rejecting it.

Public comment can make a difference in the remedial action plan.

The public is encouraged to review the PRAP and make comments either at the meeting or during the comment period that follows. The comments are reviewed and compiled in a Responsiveness Summary and modifications to the proposed remedial action plan may be made. Additional public notice is required if a modified remedial action plan differs significantly from the earlier selection.

The final remedial decision is documented in the record of decision.

DEC drafts a Record of Decision (ROD) which includes the selected remedial action, the Responsiveness Summary and a bibliography of documents that were used to reach the remedial decision. DOH and DOL have an opportunity to comment on the draft ROD before final DEC approval. When the ROD is finalized, remedial design and construction can now begin.

For a full explanation of the ROD, see the companion fact sheet, "Record of Decision".

For more information

- about the RI/FS, remedy selection process, or citizen participation activities, call DEC's 24-hour toll-free environmental remediation information line at **1 (800) 342-9296.**
- about the health impacts of a hazardous waste site, contact the Department of Health's Outreach Program at **1 (800) 458-1158.**

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New York State Department of
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Fact Sheet Record of Decision (ROD)

More information from this division:

Division of Environmental Remediation
More Remediation Fact Sheets

The Department of Environmental Conservation (DEC), along with the Departments of Health (DOH) and Law (DOL), is responsible for ensuring the cleanup of inactive hazardous waste disposal sites across the state. Under New York State's Inactive Hazardous Waste Disposal Site Remedial Program, the process begins with the discovery of a potential hazardous waste site and follows a path of thorough investigation, remedy selection, design, construction and monitoring. This fact sheet highlights one stage in the comprehensive process, the ***Record of Decision (ROD).***

The ROD contains results of the remedial investigation and remedy selection process.

The Record of Decision (ROD) presents the remedial action plan for an inactive hazardous waste disposal site and documents the information and rationale used to arrive at the decision.

The ROD is the culmination of extensive investigations and a remedy selection that identifies a solution to remove the significant threat to the public health and the environment. (For more on this, see fact sheet *Remedial Investigation/Feasibility Study.*) It serves as the definitive record of the remedy selection process for the site and as a convenient reference to other documents that were developed during the remedy selection process.

DEC gives the final approval to the ROD.

The final ROD is approved by the Department following public comment and review of the proposed remedial action plan. The project then moves on to remedial design and construction.

ROD Contents

The ROD summarizes information used to select the remedial action.

Each ROD produced for an inactive hazardous waste disposal site contains information about the site that identifies the problem and describes the remedial solution. In addition, the decision-making process that yielded the remedial action plan is documented to demonstrate that the appropriate solution was selected. The ROD contains:

- *Site location, description and history:* provides valuable insight into the previous use of the site and identifies vulnerable areas in the surrounding environment, such as residential areas and protected wetlands, groundwater, etc.
- *Problem identification:* describes the nature and extent of contamination and the pathways through which contaminants move in the environment.
- *Status of enforcement actions:* provides the enforcement history and current status for the site.
- *Goals for remedial action:* describes the overall goal of remediation, protection of public health and the environment, and remedial goals specific to each site - for example, preventing contaminated groundwater migration.
- *Discussion of remedial alternatives:* presents each potential remedial action, including a "no action" alternative, to show that technical, legal, environmental and public concerns are met.
- *The selected remedial action:* describes the planned remedy.
- *Responsiveness Summary:* documents public comments about the selected remedy. Modifications to the remedial action plan based on public comment are identified in the summary.
- *Administrative Record:* references reports and other documents developed during investigation and remedy selection.

Amendments to the ROD

Amended remedial decisions require additional review and public input.

Changes to the final remedial action plan may occur in two cases:

1. if the ROD specifically provides for later addition of documents and reserves a portion of the decision to a later time; or,
2. if new and significant information is received or generated after the ROD is finalized.

An amended ROD must go through additional review and public comment periods.

For more information

- about the Record of Decision, remedy selection process, or citizen participation activities, call DEC's 24-hour toll-free environmental remediation information line at **1 (800) 342-9296.**
- about the health impacts of a hazardous waste site, contact the Department of Health's Outreach Program at **1 (800) 458-1158.**

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New York State Department of
Environmental Conservation

Fact Sheet

Design and Construction

More information from this division:

Division of Environmental Remediation
More Remediation Fact Sheets

New York State's Inactive Hazardous Waste Disposal Site Remedial Program begins with the discovery of a potential hazardous waste site and follows a path of investigation, remedy selection, design, construction and monitoring. This fact sheet highlights the ***Design and Construction*** *phase of the program.*

The Remedial Design spells out the technical requirements of construction.

The remedial design details the size, scope and character of a site's remediation - the planned action that will, at a minimum, protect public health and the environment. It translates information from the Remedial Investigation/Feasibility Study, the Record of Decision and additional data gathered during design preparation into clear, precise facts and numbers.

Key participants are Responsible Parties (RPs), state and federal agencies.

RPs are legally responsible for site remediation. For many sites, remedial work is carried out by RPs with DEC oversight. The RPs are responsible for completion and long-term performance of the remedy. For other sites, remedial work is carried out by DEC or EPA.

DEC ensures that all remedial designs effectively protect the environment and conform to the recommendations of the Records of Decision and consent orders.

The NYS Department of Health (DOH) ensures that all remedial designs effectively protect the public and contain community health and safety considerations that must be implemented during construction.

Design elements include quality control, assurance and contingency plans.

Construction Quality Control (CQC)

A planned system of inspections that is used to directly monitor and control the quality of a construction project. CQC, usually carried out by the contractor, is necessary to achieve quality in the constructed system.

Construction Quality Assurance (CQA)

A planned system of activities to provide assurance to the owner and the permitting agency that all aspects of remedial construction meet design requirements. CQA includes inspections, verifications, audits, tests and evaluations of materials and workmanship to determine and document the quality of the remedial construction.

Contingency Plan

The contingency plan protects the local community which may be affected by an accident or emergency caused by remedial activities. Contingency plans may include:

- Name of person responsible for responding in an emergency.
- Schedule for meeting with local, state and federal agencies, the community, local emergency agencies and hospitals.
- First aid and medical information.
- Air monitoring plan if a human health risk exists through inhalation of specified pollutants.
- Spill control and countermeasures plan to prevent contamination of soil, water, air, structures, equipment or material from the discharge of wastes due to spills; to contain the spill and remove and properly dispose of media contaminated from the spill.

Citizen participation activities, which begin when the site is identified, continue through the Design and Construction phases.

When the remedial design is finalized, a fact sheet describing the proposed remedial action is distributed to the community and other interested people. The fact sheet also contains a construction schedule, explanations of the roles of the RP and DEC, details of the contingency plan and descriptions of potential inconveniences, such as excess traffic and noise. A public meeting or availability session may also be held to discuss schedules, changes in traffic patterns, location of monitoring equipment and how the public will be kept informed on progress. DEC staff ensure that all relevant documents about the site remediation are placed in repositories for public review.

At the completion of construction, another fact sheet announcing the end of construction and describing any Operation and Maintenance activities that may have been specified in the Record of Decision (ROD) is distributed to the community.

Remedial construction is carefully monitored.

Key Participants

DEC's remedial project manager attends progress meetings to discuss status of and changes in the project, test results, other findings and upcoming activities. The manager ensures that construction is not endangering public health, monitors quality assurance, coordinates remedial activities and promotes citizen participation.

The RP's or DEC's consulting engineer and inspectors test and inspect the constructor's work and confirm that test data are properly recorded and validated. Their main responsibility is to verify that construction conforms to the approved design documents.

DEC oversight ensures that the construction meets all the requirements of the approved design.

No work is performed at a site until DEC has approved the workplan. Oversight consists of two types - office and field. Office oversight includes the review, evaluation and comment on all submittals, reports, data, etc. generated by remedial activities. Field oversight is site dependent and includes consent order requirements, construction according to approved plan, public health and environmental concerns, public sensitivity and the potential for pollutant migration.

Final inspection ensures that all aspects of the design have been met by the construction.

Acceptance of the remedial work signals the next step in the remedial program - site reclassification.

Sites are often reclassified after remedial construction.

Site reclassification signals the conclusion of the remedial construction.

Following remediation, a site usually is reclassified from Class 2, which called for remedial action to protect public health or the environment, to:

- Class 4, requiring continued operation, maintenance and monitoring, or
- Class 5, requiring no operation, maintenance and monitoring.

or if all hazardous wastes have been removed, the site may be removed (delisted) from the Registry of Inactive Hazardous Waste Sites.

Operation and Maintenance may be included in the remedial program.

Included in some remedies are monitoring requirements which are included in Operation and Maintenance (O&M) Plans. O&M includes visual inspections and

upkeep and can include sampling.

For more information

- about the Design and Construction for hazardous waste sites or citizen participation activities, call DEC's 24-hour toll-free environmental remediation information line at **1 (800) 342-9296**.
- about the health impacts of a hazardous waste site, contact the Department of Health's Outreach Program at **1 (800) 458-1158**.

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New York State Department of
Environmental Conservation

Fact Sheet Interim Remedial measures (IRM)

More information from this division:

Division of Environmental Remediation
More Remediation Fact Sheets

New York State's Inactive Hazardous Waste Disposal Site Remedial Program begins with the discovery of a potential hazardous waste site and follows a path of investigation, remedy selection, design, construction and monitoring. This fact sheet highlights the ***Interim Remedial Measure (IRM),*** *a remedial action.*

IRM defined.

An IRM is a discrete set of planned actions, used for both emergency and non-emergency situations, that can be conducted without the extensive investigation and evaluation of a Remedial Investigation/Feasibility Study (RI/FS).

An IRM can be part of or the full remediation of a site.

An IRM is designed to be a permanent part of the final remedy. Sometimes, an IRM achieves the remedial goal for a site and no further action is required. When an IRM constitutes the entire remedy, DEC drafts a Proposed Remedial Action Plan (PRAP) that proposes no further action at the site and solicits public comment.

An IRM provides a quick solution to a defined problem.

An IRM is extremely adaptable. It covers a variety of activities, large and small, to remediate an array of diverse, well-defined problems at a site. Some of these problems may be contaminated soils, surface and groundwater, debris, sediments and drinking water supplies and buried and abandoned drums of waste and bulk storage tanks.

Remedial activities carried out under an IRM include:

- Removing wastes and contaminated materials, including contaminated soil, sediments and groundwater.
- Erecting access controls, such as fences.

- Removing drums of waste and bulk storage tanks.
- Constructing diversion ditches, groundwater collection systems, leachate collection systems, gas venting systems.
- Pumping and treating contaminated groundwater.
- Treating contaminated soil on-site using innovative technologies such as soil vapor extraction.
- Installing individual drinking water filter systems.
- Demolishing and removing contaminated buildings.

IRMs provide better protection of public health and the environment.

Because of their versatility and the relative speed with which they are applied, IRMs accelerate remedial projects and the sooner sites are remediated, the sooner the public and the environment are protected. In addition, accelerated remedial projects often mean reduced remedial costs.

DEC discusses IRMs with the affected communities.

In emergencies, IRMs must be implemented quickly to be most effective, making it impractical to hold public meetings and comment periods prior to the IRM actions. For time critical IRMs, the Project Manager prepares a fact sheet describing the IRM for distribution to local officials. The fact sheet is sent to interested parties and residents adjacent to the site. If time does not permit mailing the fact sheet prior to implementation of the IRM, DEC staff may telephone the information to local officials and conduct door-to-door notifications to residents.

For non-time critical IRMs the Project Manager conducts an availability session or public information meeting to explain the proposed IRM and listen to comments from local officials and the public.

At the issuance of a Proposed Remedial Action Plan, DEC ensures that the document is available to residents and interested parties and invites them to comment on the proposed remedial action. A Responsiveness Summary is prepared and issued by DEC to reply to the public comments and the Record of Decision (ROD) is signed.

State and federal agencies and RPs carry out IRMs.

DEC carries out IRMs at State-funded sites. Responsible Parties (RPs) perform IRMs at their sites under consent orders. EPA (the federal Environmental Protection Agency) carries out IRMs, calling them Emergency Response Actions, at sites on the National Priorities List.

DEC also carries out emergency actions at non-registry sites.

DEC's emergency response actions, such as drum removals, are carried out to prevent, mitigate or remedy environmental damage at sites not listed in the registry of inactive hazardous waste disposal sites.

For more information

- about Interim Remedial Measures or citizen participation activities, call DEC's 24-hour toll-free environmental remediation information line at **1 (800) 342-9296.**
- about the health impacts of a hazardous waste site, contact the Department of Health's Outreach Program at **1 (800) 458-1158.**

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New York State Department of Health

What is Exposure?

Exposure is contact. No matter how dangerous a substance or activity, without exposure, it cannot harm you.

Amount of exposure:

More than 400 years ago, a scientist said "...nothing [is] without poisonous qualities. It is only the dose that makes a thing poison." The **dose** is the amount of a substance that enters or contacts a person. An important factor to consider in evaluating a dose is body weight. If a child is exposed to the same amount of chemical as an adult, the child (who weighs less) can be affected more than the adult. For example, children are given smaller amounts of aspirin than adults because an adult dose is too large for a child's body weight.

The greater the amount of a substance a person is exposed to, the more likely that health effects will occur. Large amounts of a relatively harmless substance can be toxic. For example, two aspirin tablets can help to relieve a headache, but taking an entire bottle of aspirin can cause stomach pain, nausea, vomiting, headache, convulsions or death.

Routes of exposure:

There are three major means by which a toxic substance can come into contact with or enter the body. These are called routes of exposure.

Inhalation (breathing) of gases, vapors, dusts or mists is a common route of exposure. Chemicals can enter and irritate the nose, air passages and lungs. They can become deposited in the airways or be absorbed through the lungs into the bloodstream. The blood can then carry these substances to the rest of the body.

Direct contact (touching) with the skin or eyes is also a route of exposure. Some substances are absorbed through the skin and enter the bloodstream. Broken, cut or cracked skin will allow substances to enter the body more easily.

Ingestion (swallowing) of food, drink, or other substances is another route of exposure. Chemicals that get in or on food, cigarettes, utensils or hands can be swallowed. Children are at greater risk of ingesting substances found in dust or soil because they often put their fingers or other objects in their mouths. Lead in paint chips is a good example. Substances can be absorbed into the blood and then transported to the rest of the body.

The route of exposure can determine whether or not the toxic substance has an effect. For example, breathing or swallowing lead can result in health effects, but touching lead is not usually harmful because lead is not absorbed particularly well through the skin.

Information Sheet

Length of exposure:

Short-term exposure is called **acute exposure**. Long-term exposure is called **chronic exposure**. Either may cause health effects that are immediate or health effects that occur days or years later.

Acute exposure is a short contact with a chemical. It may last a few seconds or a few hours. For example, it might take a few minutes to clean windows with ammonia, use nail polish remover or spray a can of paint. The fumes someone might inhale during these activities are examples of acute exposures.

Chronic exposure is continuous or repeated contact with a toxic substance over a long period of time (months or years). If a chemical is used every day on the job, the exposure would be chronic. Over time, some chemicals, such as PCBs and lead, can build up in the body and cause long-term health effects.

Chronic exposures can also occur at home. Some chemicals in household furniture, carpeting or cleaners can be sources of chronic exposure.

Sensitivity:

All people are not equally **sensitive** to chemicals, and are not affected by them in the same way. There are many reasons for this.

- People's bodies vary in their ability to absorb and break down or eliminate certain chemicals due to **genetic differences.**
- People may become **allergic** to a chemical after being exposed. Then they may react to very low levels of the chemical and have different or more serious health effects than nonallergic people exposed to the same amount. People who are allergic to bee venom, for example, have a more serious reaction to a bee sting than people who are not.
- Factors such as **age, illness, diet, alcohol use, pregnancy and medical or nonmedical drug use** can also affect a person's sensitivity to a chemical. Young children are often more sensitive to chemicals for a number of reasons. Their bodies are still developing and they cannot get rid of some chemicals as well as adults. Also, children absorb greater amounts of some chemicals (such as lead) into their blood than adults.

For more information call:

New York State Department of Health.
2 University Place, Rm 240
Albany, NY 12203
1-800-458-1158 (ext. 402)

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Future Project Fact Sheets