

FACT SHEET

1. PROJECT DATA:

Name: Lake Ontario Ordnance Works (LOOW)
Number: CO2NY002500, 01, 04, 05
Location: Lewiston/Porter, NY
Phase: Interim Remedial Design (RD), Remedial
Investigation/Feasibility Study (RI/FS)
Funding Type: FUDS
A-Es: Roy F. Weston, Inc. (RD)
EA Engineering, Inc. (RI/FS)

2. PROJECT TEAM:

Customer: DOD
NAN Project Manager: David Brouwer, CENAN, (732)435-0079
NAB Design Manager: Justina Wesley, CENAB-EN-HN, (410) 962-6734
Internet: justina.t.wesley@usace.army.mil

3. PROJECT DESCRIPTION: The former Lake Ontario Ordnance Works (LOOW) site is located within the townships of Lewiston and Porter in Niagara County, New York. The site is approximately ten miles north of the city of Niagara Falls, 15 miles west of the city of Lockport, two miles south of Lake Ontario and less than two miles east of the Niagara River.

The original LOOW site encompassed approximately 7,500 acres with DOD site activity having occurred on 2,500 acres. During 1942-1943, the LOOW was used as a manufacturing plant producing the explosive trinitrotoluene (TNT) for World War II. Portions of the LOOW site have since been used by several branches of the Department of Defense and Energy for various manufacturing and storage activities including the pilot production of high energy fuels.

The manufacturing portion of the plant was situated in the central southwestern section of the LOOW site, south of Balmer Road. Wastewater from the TNT manufacturing operation, as well as stormwater and sanitary sewage, was transferred through an underground sewer network to a wastewater treatment plant located in the western portion of the TNT plant. The TNT waste pipelines ran as one pair of east-west trending lines across the TNT production area before being routed south to the wastewater treatment plant at the west end of the production line.

An overestimation by the Army of the need for TNT during World War II resulted in the closure of the TNT plant in July 1943 after only 9 months of operation. Following the decommissioning of the TNT plant, the majority of the LOOW facility was sold to private citizens with the government retaining the former active 2,500-acre portion of the site.

In 1969, Chem-Trol Pollution Services, Inc. acquired portions of the LOOW for the development of a hazardous waste treatment, storage, and disposal (TSD) facility. Chem-Trol was acquired by SCA Chemical Services Inc. (SCA) in 1973, and subsequently acquired by Chemical Waste Management (CWM) in the early 1980s. In 1972, the Somerset Group obtained an approximate 100-acre section of the former LOOW property which contained Air Force Plant (AFP) 68. In 1979, the southern half of the former AFP-68 (approximately 50 acres) was sold

to SCA Chemical Services. This section is presently owned by CWM. The majority of the LOOW property that was sold to the private land owners consists of the 2,500 acre parcel formally owned by the Government.

4. PROJECT BACKGROUND: Acres International conducted a Remedial Investigation/Feasibility Study (RI/FS) of OU1, from April 1988 until July 1988, under a negotiated fixed price contract with the Kansas City District. The RI/FS performed for OU1 consisted of the TNT pipeline, the Chemical Waste Sewer and the Drum Trench referred to as Area A and the Burn Pit referred to as Area B. A Preliminary Contamination Assessment (PCA) was performed from October 1991 until January 1992, for OU-2 which consists of loose chemicals on the Somerset property and Asbestos. Because OU-1 and OU-2 are adjacent and independent sites, preparation of the OU-1 Final Feasibility Study (FS) was delayed until the results of the OU-2 RI/FS could be obtained. The site-wide RI/FS, to include OU-2, will be performed in FY98 and FY99. The LOOW project was transferred to the Baltimore District in April 1994 at which time the results of the OU-1 FS were combined with the OU-2 PCA into one Engineering Evaluation and Cost Analysis (EE/CA) report. The use of Operable Units (OUs) is no longer being utilized on the project. The EE/CA was finalized in March 1995. The Interim Remedial Design based on the EE/CA was awarded in June 1996. Due to the limitation on funding, the interim remedial design was broken out into three phases. Phase I consists of the removal of the TNT pipeline, the chemical waste line, miscellaneous chemicals and asbestos. Phase II consists of the remediation of Area B and phase III consists of the remediation of Area A. The phase I portion of the design proceeded to 60% completion and will be placed on the PRAC contract for construction in March 1998 depending on the availability of funds. Proceeding to a 100% design for Phase II and III has yet to be determined. An asbestos survey and a comprehensive sitewide RI/FS are currently being performed by NAB.

The Baltimore District in conjunction with the Waterways Experiment has implemented an innovative technology project for this site that is being addressed under the Remedial Design. The Research and Development for this project consists of the Bioremediation of TNT and PCBs. WES has investigated and developed a bioremediation strategy for the TNT waste pipeline sediments and surrounding contaminated soils. The investigation for the bioremediation of PCBs in soils is still in the infant stages. The success of the biotreatment strategy for TNT and PCB contaminated sediments and soils at the LOOW site will result in significantly reducing the assessed risk to human health and the environment and minimizing the risk of contaminant migration via the various transport media by reducing the potential sources of contamination.

5. MAJOR CONTAMINANTS: Trinitrotoluene, Dinitrotoluene, Amino-DNTs, Chlorobenzene, Dichloroethane, Methylene chloride, acetone, PCBs, Arsenic, radioactive materials, asbestos, etc.

6. MODE OF CLEAN UP: Remediation of the TNT pipeline, Chemical waste line, various chemicals and asbestos.

7. CURRENT STATUS: The Comprehensive Sitewide RI/FS was awarded in June 1997. The RI/FS is expected to be completed in FY01. The asbestos survey was awarded in September 1997 and completed in October 1997. The Phase I interim Remedial Action is expected to be awarded in March 1998 under the PRAC contract, pending the availability of funds.

8. CONDITION CODE: GREEN.

9. ISSUES AND CONCERNS: The availability of project funding for the performance of the Interim Removal Action. The RI/FS contract requires a modification in the amount of 100K, due to the increase in the level of effort performed in the History Search task. The Aerial survey contract requires a modification in the amount of 10K. The contract modifications should be performed immediately.

The geographical PM notified the DM during a meeting held in November 1997 that there is a potential that \$2 Million would be allocated for the Interim Remedial Action. On February 4, 1998 the geographical PM indicated that only \$500,000.00 would be available to award the interim RA. NAB is currently evaluating the most feasible way to perform the work with only \$500,000.00 available to begin the interim removal action. The removal of the friable asbestos will be the first task to be completed under the RA due to the limited funding.

10. SCHEDULE.

<u>Phase</u>	<u>Status</u>	<u>Original Start</u>	<u>Schedule Start</u>	<u>Actual Start</u>	<u>Original Complete</u>	<u>Schedule Complete</u>	<u>Actual Complete</u>
RD	U	06/02/95	06/02/95	06/30/96	12/31/97	12/31/97	TBD
RI/FS	U	06/30/97	06/30/97	06/30/97	10/31/01	10/31/01	TBD
RA	F	03/31/98	03/31/98	TBD	10/31/00	10/31/00	TBD

NOTE: The schedule for the innovative technology portion of this project is contingent upon the removal of the TNT pipeline. WES was instructed in December to develop a schedule to reflect the pipeline removal in the spring of 1998. Funding for this portion is not yet available, therefore this schedule will not be developed until a status on the funding can be obtained.

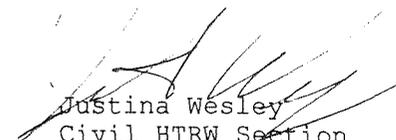
NOTE: The schedule for the Interim RA included with this fact sheet is for Phase I of the removal action. The remainder of the phases included in the interim RA can not be scheduled until funding becomes available.

11. FUNDING.

<u>Fund Type</u>	<u>Previous FY(s)</u>	<u>Current FY</u>	<u>Total</u>
Funds received	\$4,652,180	\$ 2,650,000	\$7,302,180
IN-House	\$ 740,313	\$ 550,000	\$1,290,313
Contract	\$3,911,867	\$ 2,100,000	\$6,011,867
Unobligated	\$	\$	\$

12. ADDITIONAL FUNDS REQUIRED CURRENT FY: \$2,100,000 (To perform Phase I of the interim RA) and to modify the existing RI/FS and RD, contracts.

PREPARED BY:


 Justina Wesley
 Civil HTRW Section
 HTRW Branch

AUTHENTICATION:


 Clint Anuszewski
 Acting Chief, HTRW Branch
 Engineering Division

LOOW PHASE I INTERIM REMEDAL ACTION

ID	Task Name	Duration	Qtr 1, 1998		Qtr 2, 1998			Qtr 3, 1998			Qtr 4, 1998			Qtr 1, 1999			Qtr 2, 1999			Qtr 3, 1999		
			Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	Preparation of SOW for IRA	1d																				
2	PRAC Contract Award	39d	█	█	█																	
3	Community Meeting	3d			█																	
4	Mobilization to Site	30d			█	█	█															
5	Removal of Asbestos & Chem	90d				█	█	█	█	█												
6	TNT Pipeline Removal	50d								█	█	█	█									
7	Demobilization	68d											█	█	█	█	█					
8	Mobilization to Site	25d																				
9	Continuation of TNT removal	130d																				
10	Demobilization	100d																				
11	Mobilization	25d																				
12	Remediation of Area A	180d																				
13	Demobilization	60d																				
14	Mobilization	25d																				
15	Remediation of Area B	180d																				
16	Demobilization (IRA Complete)	30d																				

Project: XXXXXXXXXX Date: 2/10/98

Task XXXXXXXXXX Summary XXXXXXXXXX Rolled Up Progress XXXXXXXXXX

Progress XXXXXXXXXX Rolled Up Task XXXXXXXXXX

Milestone ◆ Rolled Up Milestone ◇

Lake Ontario Ordnance Works Planned Project Costs
FY 98-FY03

2/12/98

COST CATEGORY	PROJECT/PLANN FY 98		FY99	FY00	FY01	FY02	FY03
RD (In-house)	\$ 350,000.00	\$ 350,000.00					
RI (In-House)	\$ 300,000.00	\$ 300,000.00					
Interim RA (In-House)	\$ 50,000.00		\$ 50,000.00				
Interim RA (Contract)	\$ 12,000,000.00	\$ 4,000,000.00	\$ 2,000,000.00	\$ 4,500,000.00	\$ 1,500,000.00		
FS (In-House)	\$ 100,000.00		\$ 50,000.00	\$ 50,000.00			
FS (Contract)	\$ 2,000,000.00			\$ 2,000,000.00			
RD Phase I Sitewide (In-House)	\$ 75,000.00				\$ 75,000.00		
RD Phase I Sitewide (Contract)	\$ 1,500,000.00				\$ 1,500,000.00		
RD Phase II Sitewide (In-House)	\$ 75,000.00					\$ 75,000.00	
RD Phase II Sitewide (Contract)	\$ 1,500,000.00					\$ 1,500,000.00	
RA Phase I Sitewide (In-house)	\$ 50,000.00				\$ 25,000.00	\$ 25,000.00	
RA Phase I Sitewide (Contract)	\$ 12,500,000.00					\$ 12,500,000.00	
RA Phase II Sitewide (In-House)	\$ 45,000.00					\$ 25,000.00	\$ 20,000.00
RA Phase II Sitewide (Contract)	\$ 25,000,000.00					\$ 12,500,000.00	\$ 12,500,000.00
				\$ -	\$ -	\$ -	\$ -
TOTAL	\$ 55,545,000.00	\$ 4,650,000.00	\$ 2,100,000.00	\$ 6,550,000.00	\$ 3,100,000.00	\$ 26,625,000.00	\$ 12,520,000.00

NOTE: THE COSTS ESTIMATED ON THIS SPREADSHEET DO NOT REFLECT THE RESULTS OF THE RI/FS CURRENTLY UNDERWAY.

LAKE ONTARIO ORDNANCE WORKS SITEWIDE R/FS

ID	Task Name	Duration	1997												1998												1999												2000												2001											
			Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct																			
1	Task 1 - Scoping	0d	Completed prior to Notice to Proceed																																																											
2	Task 2 - GIS Setup and Historical Data Input	1d	Completed prior to Notice to Proceed																																																											
3	Task 3 - History Search	1129d	Completed prior to Notice to Proceed																																																											
4	Task 3 - History Search	130d	Completed prior to Notice to Proceed																																																											
5	3.1 File Search	10d	Completed prior to Notice to Proceed																																																											
6	3.2 Aerial Photograph Review	10d	Completed prior to Notice to Proceed																																																											
7	3.3 Title Search	10d	Completed prior to Notice to Proceed																																																											
8	3.4 History Search Report	130d	Completed prior to Notice to Proceed																																																											
9	3.4.1 Prepare Draft History Search Report	60d	Completed prior to Notice to Proceed																																																											
10	3.4.2 Submit Draft History Search Report	0d	Completed prior to Notice to Proceed																																																											
11	3.4.3 COE Review	20d	Completed prior to Notice to Proceed																																																											
12	3.4.4 Receive Comments from the COE	0d	Completed prior to Notice to Proceed																																																											
13	3.4.5 Submit Response to Comments	20d	Completed prior to Notice to Proceed																																																											
14	3.4.6 Resolve Comments with the COE	20d	Completed prior to Notice to Proceed																																																											
15	3.4.7 Revise Draft History Search Report	10d	Completed prior to Notice to Proceed																																																											
16	3.4.8 Submit Final History Search Report	0d	Completed prior to Notice to Proceed																																																											
17	Task 4 - Project Planning Documents	101d	Completed prior to Notice to Proceed																																																											
18	4.1 Sitemide Work Plan	101d	Completed prior to Notice to Proceed																																																											
19	4.1.1 Work Plan Rationale	30d	Completed prior to Notice to Proceed																																																											
20	4.1.2 Prepare Draft Sitemide Work Plan	30d	Completed prior to Notice to Proceed																																																											
21	4.1.3 Submit Draft Sitemide Work Plan	0d	Completed prior to Notice to Proceed																																																											
22	4.1.4 COE Review	20d	Completed prior to Notice to Proceed																																																											
23	4.1.5 Receive Comments from the COE	0d	Completed prior to Notice to Proceed																																																											
24	4.1.6 Review Conference to Discuss Comments	1d	Completed prior to Notice to Proceed																																																											
25	4.1.7 Response to Comments	20d	Completed prior to Notice to Proceed																																																											
26	4.1.8 Submit Response to Comments	0d	Completed prior to Notice to Proceed																																																											
27	4.1.9 Revise Comments with the COE	20d	Completed prior to Notice to Proceed																																																											
28	4.1.10 Revise Draft Sitemide Work Plan	10d	Completed prior to Notice to Proceed																																																											
29	4.1.11 Submit Final Sitemide Work Plan	0d	Completed prior to Notice to Proceed																																																											
30	4.2 Sitemide Health and Safety Plan	91d	Completed prior to Notice to Proceed																																																											
31	4.2.1 Prepare Draft Sitemide Health and Safety Plan	30d	Completed prior to Notice to Proceed																																																											
32	4.2.2 Submit Draft Sitemide Health and Safety Plan	0d	Completed prior to Notice to Proceed																																																											
33	4.2.3 COE Review	20d	Completed prior to Notice to Proceed																																																											
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38	4.2.8 Resolve Comments with the COE	10d	Completed prior to Notice to Proceed																																																											
39	4.2.9 Revise Draft Sitemide Health and Safety Plan	10d	Completed prior to Notice to Proceed																																																											
40	4.2.10 Submit Final Sitemide Health and Safety Plan	0d	Completed prior to Notice to Proceed																																																											
41	4.3 Sitemide Sampling and Analysis Plan	91d	Completed prior to Notice to Proceed																																																											
42	4.3.1 Prepare Draft Sitemide Sampling and Analysis Plan	30d	Completed prior to Notice to Proceed																																																											
43	4.3.2 Submit Draft Sitemide Sampling and Analysis Plan	0d	Completed prior to Notice to Proceed																																																											
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47	4.3.6 Response to Comments	20d	Completed prior to Notice to Proceed																																																											
48	Submit Response to Comments	0d	Completed prior to Notice to Proceed																																																											

Task

Progress

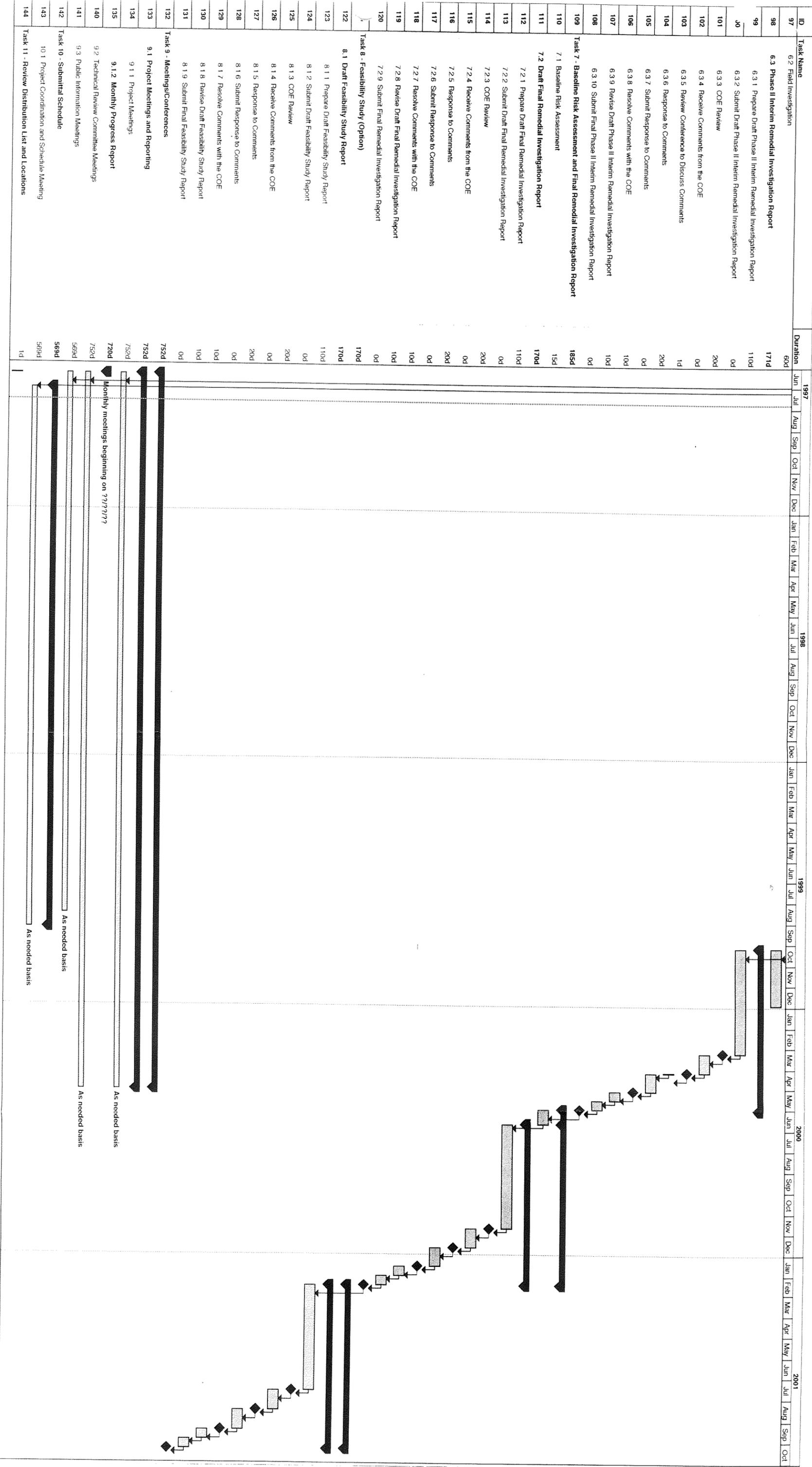
Milestone

Summary

Rolled Up Task

Rolled Up Progress

LAKE ONTARIO ORDNANCE WORKS SITEWIDE R/FS



Project Lake Ontario Ordinance Works (LCOW) 6095/746
 Date: 7/25/97
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Task Progress Milestone Summary Rolled Up Task Rolled Up Progress