

Janaury 20, 2004
10077.004

Oregon Department of Environmental Quality
Northwest Region
2020 SW Fourth Avenue
Suite 400
Portland, Oregon 97201-4987

VIA Email

Attention: Anna Coates

**Subject: Progress Report – December 2003
Remedial Investigation/Feasibility Study/Interim Removal Action Measures
Astoria Area-Wide Petroleum Site
Astoria, Oregon
DEQ ECSI File #2277**

Dear Ms. Coates:

This letter presents the progress made by the PRP Group during December 2003 on RI/FS and IRAM Development at the Astoria Area-Wide Petroleum Site in Astoria, Oregon. This work is being conducted in response to DEQ Order No. ECSR-NWR-01-11.

WORK COMPLETED DURING DECEMBER 2003

A work plan for investigation and decommissioning of product pipelines was completed for submittal to DEQ.

Final electronic deliverables for the Fourth Quarter 2003 ground-water monitoring event were received in December. Water levels in all monitoring wells were measured during December.

Analytical data for storm water samples collected during the Fourth Quarter 2003 were received from the laboratory.

The work plan for characterization of indoor air pathways was completed and submitted to DEQ in December.

Work on preparation of the design and specifications for the enhanced boom and storm sewer rerouting that make up the hydrocarbon seep IRAM was completed and submitted to DEQ in December.

Meetings of the PRP Group representatives were held on December 2 and December 9.

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WORK PLANNED FOR JANUARY 2004 AND FEBRUARY 2004

Pending DEQ approval, implementation of the work plan for investigation along product pipelines is scheduled for February.

Data validation activities and preparation of the quarterly ground-water monitoring report for the Fourth Quarter 2003 (1st Round) monitoring event will be completed in January. The water-level monitoring program will be continued in the complete monitoring-well network in January. The well construction documentation will be completed in January. Ground-water sampling for the First Quarter 2004 sampling event (2nd Round) will begin in January.

A report describing the results of the Third Quarter 2003 storm water sampling event will be submitted to the DEQ in January.

The Level 1 ecological evaluation is scheduled to begin in February.

Implementation of the vapor intrusion pathway assessment is scheduled to begin in March.

A work plan to fill data gaps related to evaluation of the hydrocarbon seep at Slip 2 will be prepared during January and February. Implementation of the IRAM is scheduled to begin in late January and continue through March. The interim product removal activities associated with the hydrocarbon seep IRAM are scheduled to continue in January and February.

PROBLEMS ENCOUNTERED AND RESOLUTIONS

An updated schedule, reflecting our discussion on December 12, is attached to the this progress report.

CLOSING COMMENTS

Please call me at (503)768-5121 if you have any questions or comments regarding this progress report.

Sincerely,
EnviroLogic Resources, Inc.

Thomas J. Calabrese

Thomas J. Calabrese, RG, CWRE
Principal/Hydrogeologist
Project Manager
cc: Distribution list attached

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January 20, 2004
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**ASTORIA AREA-WIDE PETROLEUM SITE
Distribution List**

- 1 Anna Coates, DEQ Project Manager, Site Response
 - 1 Mike Lilly, Attorney for Port of Astoria
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 - 1 Cary E. Bechtolt, Niemi Oil Company
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 - 1 Richard Delphia, Delphia Oil Company
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 - 1 Brian Jacobson, Qwest Communications International, Inc.
 - 1 David Bledsoe, Perkins Coie LLP, Attorney for Qwest Communications International, Inc.
 - 1 Donna LaCombe, Tetra Tech EM, Inc., Consultant for Qwest Communications International
 - 1 Anita W. Lovely, Lovely Consulting, Inc., Consultant for Exxon Mobil Corporation
-

UPDATED SCHEDULE (1/20/04)

**Remedial Investigation/Feasibility Study
Astoria Area-Wide Petroleum Site
Astoria, Oregon**

ID	Task Description	Duration	Start	Finish	Predecessors
1	ASTORIA AREA-WIDE PETROLEUM STUDY	924 days	1/9/2002	9/12/2005	
2					
3	R/I/FS and IRAM PROPOSAL	11 days	1/9/2002	1/21/2002	
4					
17					
18	R/I/FS and IRAM DEVELOPMENT WORK PLAN	124 days	1/9/2002	7/1/2002	
19					
58					
59	PHASE 1/2 R/I/FS and IRAM WORK PLAN IMPLEMENTATION	694 days	1/9/2002	10/11/2004	
60					
61	SOURCE/SOIL CHARACTERIZATION	577 days	1/9/2002	4/23/2004	
62	Phase 1 Source/Soil Characterization	273 days	1/9/2002	1/31/2003	
99	Phase 2 Soil Characterization	243 days	4/30/2003	4/23/2004	
100	Phase 2 Soil Characterization Work Plan	51 days	4/30/2003	7/15/2003	
106	Phase 2 Soil Characterization Field Work	170 days	8/15/2003	4/23/2004	
107	Field Preparation	96 days	8/15/2003	1/9/2004	
108	DEQ Approval of Work Plan	1 day	8/15/2003	8/15/2003	105FS+30 edays
109	Utility Clearance Survey	5 days	8/18/2003	8/22/2003	108
110	Pipeline Characterization Work Plan	95 days	8/18/2003	1/9/2004	108
111	Drilling Program	113 days	8/25/2003	2/11/2004	
112	Mobilization/Demobilization	1 day	8/25/2003	8/25/2003	109
113	Install/Sample Borings	10 days	8/26/2003	9/9/2003	112
114	Pipeline Drilling Program	3 days	2/9/2004	2/11/2004	110FS+30 edays
115	Analytical Program	50 days	8/28/2003	11/6/2003	
116	Laboratory Analyses	30 days	8/28/2003	10/9/2003	113SS+2 days
117	Data Validation	10 days	10/10/2003	10/23/2003	116
118	Analytical Data Compilation	10 days	10/24/2003	11/6/2003	117
119	Reporting	36 days	3/5/2004	4/23/2004	
120	Draft P2 Soil Characterization TM	15 days	3/5/2004	3/25/2004	118,114FS+15 days
121	PRP Group Review	10 days	3/26/2004	4/8/2004	120
122	Final P2 Soil Characterization TM	10 days	4/9/2004	4/22/2004	121
123	Submittal to DEQ	1 day	4/23/2004	4/23/2004	122
124					
125	GROUND-WATER CHARACTERIZATION	534 days	8/12/2002	9/28/2004	
126	Water-Level Measurement Program	460 days	8/12/2002	6/11/2004	
127	Install Data Loggers/Transducers	3 days	8/27/2002	8/29/2002	174,66
128	P1 Water-Level Measurement	232 days	8/12/2002	7/11/2003	
141	P2 Water-Level Measurement	85 days	8/11/2003	12/11/2003	
147	2004 P1 Water-Level Measurement	108 days	1/12/2004	6/11/2004	
148	2004 P1 Water-Level Measurement 1	2 days	1/12/2004	1/13/2004	
149	2004 P1 Water-Level Measurement 2	2 days	2/10/2004	2/11/2004	
150	2004 P1 Water-Level Measurement 3	2 days	3/10/2004	3/11/2004	
151	2004 P1 Water-Level Measurement 4	2 days	4/12/2004	4/13/2004	
152	2004 P1 Water-Level Measurement 5	2 days	5/10/2004	5/11/2004	
153	2004 P1 Water-Level Measurement 6	2 days	6/10/2004	6/11/2004	
154	Beneficial Ground Water and Land Use Studies	126 days	8/27/2002	2/21/2003	
161	Monitoring-Well Installation Program	365 days	8/20/2002	2/5/2004	
162	Monitoring-Well Installation Plan	149 days	12/27/2002	7/31/2003	
171	Drilling Program	319 days	8/20/2002	11/20/2003	
172	Mobilization/Demobilization	1 day	8/25/2003	8/25/2003	170,109
173	Install/Develop Monitoring Wells	20 days	8/26/2003	9/23/2003	172,109
174	Redevelop Existing Monitoring Wells	5 days	8/20/2002	8/26/2002	72
175	Field Data Reduction	20 days	8/27/2003	9/24/2003	173SS+1 day
176	Survey Monitoring Wells	12 days	11/5/2003	11/20/2003	173FS+30 days
177	Well Installation Report	46 days	11/21/2003	2/5/2004	
178	Draft Well Installation TM	30 days	11/21/2003	1/14/2004	176
179	PRP Group Review	10 days	1/15/2004	1/28/2004	178
180	Final Well Installation TM	5 days	1/29/2004	2/4/2004	179
181	Submittal to DEQ	1 day	2/5/2004	2/5/2004	180
182	Quarterly Monitoring Program	241 days	10/8/2003	9/28/2004	
183	4Q03 Ground-Water Analytical Program	54 days	10/8/2003	12/30/2003	
194	1Q04 Ground-Water Analytical Program	59 days	1/12/2004	4/2/2004	
195	Mobilization/Demobilization	2 days	1/12/2004	1/13/2004	184FS+92 edays
196	Ground-Water Sampling (1Q04)	10 days	1/14/2004	1/27/2004	195
197	Laboratory Analyses	25 days	1/15/2004	2/18/2004	196SS+1 day
198	Data Validation	5 days	2/19/2004	2/26/2004	197
199	Analytical Data Compilation	2 days	2/27/2004	3/1/2004	198
200	1Q04 Ground-Water Reporting	31 days	2/19/2004	4/2/2004	
201	Draft 1Q04 Ground-Water Sampling TM	15 days	2/19/2004	3/11/2004	197
202	PRP Group Review	10 days	3/12/2004	3/25/2004	201
203	Final 1Q04 Ground-Water Sampling TM	5 days	3/26/2004	4/1/2004	202
204	Submittal to DEQ	1 day	4/2/2004	4/2/2004	203
205	2Q04 Ground-Water Analytical Program	54 days	4/12/2004	6/28/2004	
216	3Q04 Ground-Water Analytical Program	54 days	7/13/2004	9/28/2004	
227	Hydraulic Characterization Program (NOT CURRENTLY PLANNED)	46 days	3/1/2004	5/4/2004	
228	Slug Testing	10 days	3/1/2004	3/15/2004	185FS+5 days,199
229	Slug-Test Analysis	10 days	3/15/2004	3/29/2004	228
230	Slug Test Reporting	26 days	3/29/2004	5/4/2004	
231	Draft Slug-Testing TM	10 days	3/29/2004	4/12/2004	229
232	PRP Group Review	10 days	4/13/2004	4/26/2004	231
233	Final Slug-Testing TM	5 days	4/26/2004	5/3/2004	232
234	Submittal to DEQ	1 day	5/3/2004	5/4/2004	233
235					

UPDATED SCHEDULE (1/20/04)

**Remedial Investigation/Feasibility Study
Astoria Area-Wide Petroleum Site
Astoria, Oregon**

ID	Task Description	Duration	Start	Finish	Predecessors
236	STORM/SURFACE WATER CHARACTERIZATION	472 days	8/19/2002	7/8/2004	
237	Storm Water Monitoring Plan	117 days	8/19/2002	1/31/2003	
241	Quarterly Storm Water Monitoring Program	195 days	9/23/2003	7/8/2004	
242	3Q03 Storm Water Analytical Program (was 2Q03)	38 days	9/23/2003	11/13/2003	
253	4Q03 Storm Water Analytical Program	53 days	11/24/2003	2/17/2004	
254	Mobilization/Demobilization	1 day	11/24/2003	11/24/2003	
255	Storm-Water Sampling (4Q03)	1 day	11/25/2003	11/25/2003	254
256	Laboratory Analyses	15 days	12/1/2003	12/19/2003	255
257	Data Validation	2 days	12/22/2003	12/23/2003	256
258	Analytical Data Compilation	1 day	12/29/2003	12/29/2003	257
259	4Q03 Storm-Water Reporting	36 days	12/22/2003	2/17/2004	
260	Draft 4Q03 Storm-Water Sampling TM	20 days	12/22/2003	1/26/2004	256
261	PRP Group Review	10 days	1/27/2004	2/9/2004	260
262	Final 4Q03 Storm-Water Sampling TM	5 days	2/10/2004	2/16/2004	261
263	Submittal to DEQ	1 day	2/17/2004	2/17/2004	262
264	1Q04 Storm Water Analytical Program	38 days	2/11/2004	4/5/2004	
265	Mobilization/Demobilization	1 day	2/11/2004	2/11/2004	
266	Storm-Water Sampling (1Q04)	1 day	2/12/2004	2/12/2004	265
267	Laboratory Analyses	10 days	2/13/2004	2/27/2004	266
268	Data Validation	2 days	3/1/2004	3/2/2004	267
269	Analytical Data Compilation	1 day	3/3/2004	3/3/2004	268
270	1Q04 Storm-Water Reporting	26 days	3/1/2004	4/5/2004	
271	Draft 1Q043 Storm-Water Sampling TM	10 days	3/1/2004	3/12/2004	267
272	PRP Group Review	10 days	3/15/2004	3/26/2004	271
273	Final 1Q04 Storm-Water Sampling TM	5 days	3/29/2004	4/2/2004	272
274	Submittal to DEQ	1 day	4/5/2004	4/5/2004	273
275	2Q04 Storm Water Analytical Program	38 days	5/13/2004	7/8/2004	
286					
287	SEDIMENT CHARACTERIZATION	179 days	6/13/2003	3/8/2004	
288	Mobilization/Demobilization	1 day	6/13/2003	6/13/2003	164FS+30 edays,139FS+1 day
289	Sediment Sampling	1 day	6/16/2003	6/16/2003	288
290	Laboratory Analyses	10 days	6/17/2003	6/30/2003	289
291	Data Validation	1 day	7/1/2003	7/1/2003	290
292	Analytical Data Compilation	1 day	7/2/2003	7/2/2003	291
293	Reporting	86 days	7/7/2003	11/4/2003	
298	PHASE 2 SEDIMENT CHARACTERIZATION	1 day	3/8/2004	3/8/2004	297FS+30 edays
299	Phase 2 Work Plan (see Level 2 Eco Evaluation Work Plan)	1 day	3/8/2004	3/8/2004	486SS
300					
301	IRAM DEVELOPMENT	599 days	5/13/2002	10/1/2004	
302	INDOOR AIR QUALITY IRAM DEVELOPMENT	440 days	12/27/2002	10/1/2004	
303	Comparison of Soil Data to Screening Levels	10 days	12/27/2002	1/10/2003	81
304	Indoor Air IRAM Development	354 days	4/30/2003	10/1/2004	
305	Air Quality Sampling Work Plan	155 days	4/30/2003	12/12/2003	
306	PRP Consultants Prepare Site-Specific Plan	20 days	4/30/2003	5/29/2003	164
307	Develop Draft Air Quality Work Plan	20 days	5/30/2003	6/26/2003	306
308	PRP Group Review	109 days	6/27/2003	12/4/2003	307
309	Final Air Quality Work Plan	5 days	12/5/2003	12/11/2003	308
310	Submittal to DEQ	1 day	12/12/2003	12/12/2003	309
311	Vapor Intrusion Pathway Sampling	94 days	1/12/2004	5/21/2004	164
312	DEQ Approval of Work Plan	1 day	1/12/2004	1/12/2004	310FS+30 edays
313	Mobilization/Demobilization	5 days	2/25/2004	3/2/2004	312FS+30 days
314	Probe Installation and Sampling	10 days	3/3/2004	3/16/2004	313
315	Laboratory Analyses (incl in sampling)	20 days	3/4/2004	3/31/2004	314SS+1 day
316	Data Validation	5 days	4/1/2004	4/7/2004	315
317	Analytical Data Compilation	1 day	4/8/2004	4/8/2004	316
318	Draft Vapor Intrusion Pathway Report	15 days	4/9/2004	4/29/2004	317
319	PRP Group Review	10 days	4/30/2004	5/13/2004	318
320	Final Vapor Intrusion Pathway Report	5 days	5/14/2004	5/20/2004	319
321	Submittal to DEQ	1 day	5/21/2004	5/21/2004	320
322	Air Quality Reporting and IRAM Work Plan	91 days	5/24/2004	10/1/2004	
323	Air Quality Evaluation	10 days	5/24/2004	6/7/2004	321
324	Technology Screening (if necessary)	15 days	6/8/2004	6/28/2004	303,323
325	Detailed Evaluation of Alternatives (if necessary)	15 days	6/29/2004	7/21/2004	324
326	Implementation Plan Proposal (if necessary)	30 days	7/22/2004	9/1/2004	325
327	Prepare Draft Document	10 days	9/2/2004	9/16/2004	326
328	PRP Group Review	5 days	9/17/2004	9/23/2004	327
329	Final Air Quality TM or IRAM Work Plan	5 days	9/24/2004	9/30/2004	328
330	Submittal to DEQ	1 day	10/1/2004	10/1/2004	329
331	HYDROCARBON SEEP IRAM DEVELOPMENT	287 days	6/12/2003	8/9/2004	
332	Bail-Down Testing	3 days	6/12/2003	6/16/2003	139
333	Water Quality Sampling at Seep MWs	2 days	6/17/2003	6/18/2003	332
334	Product Removal	125 days	6/16/2003	12/15/2003	
342	2004 A Product Removal	107 days	1/12/2004	6/10/2004	
343	2004 A Product Removal 1	1 day	1/12/2004	1/12/2004	
344	2004 A Product Removal 2	1 day	2/10/2004	2/10/2004	
345	2004 A Product Removal 3	1 day	3/10/2004	3/10/2004	
346	2004 A Product Removal 4	1 day	4/12/2004	4/12/2004	
347	2004 A Product Removal 5	1 day	5/10/2004	5/10/2004	
348	2004 A Product Removal 6	1 day	6/10/2004	6/10/2004	
349	Hydrocarbon Seep IRAM Work Plan	67 days	6/17/2003	9/22/2003	
355	Hydrocarbon Seep IRAM Implementation	150 days	11/24/2003	7/7/2004	
356	IRAM Design/DEQ Submittal	18 days	11/24/2003	12/22/2003	354FS+60 edays
357	DEQ Review	30 edays	12/22/2003	1/21/2004	356

UPDATED SCHEDULE (1/20/04)

**Remedial Investigation/Feasibility Study
Astoria Area-Wide Petroleum Site
Astoria, Oregon**

ID	Task Description	Duration	Start	Finish	Predecessors
358	Bid/Contracting	15 days	1/22/2004	2/11/2004	357
359	Sewer Reroute and Boom Construction	40 days	2/12/2004	4/8/2004	358
360	Draft Completion Report/As-Built	40 days	4/9/2004	6/4/2004	359
361	PRP Group Review	10 days	6/7/2004	6/18/2004	360
362	Final Completion Report	10 days	6/21/2004	7/6/2004	361
363	Submittal to DEQ	1 day	7/7/2004	7/7/2004	362
364	Upland Data Collection	138 days	1/23/2004	8/9/2004	
365	UDC Work Plan	41 days	1/23/2004	3/22/2004	
366	Draft UDC Work Plan Preparation	20 days	1/23/2004	2/19/2004	356SS,436FS+5 days
367	PRP Group Review	10 days	2/20/2004	3/5/2004	366
368	Final UDC Work Plan	10 days	3/8/2004	3/19/2004	367
369	Submittal to DEQ	1 day	3/22/2004	3/22/2004	368
370	UDC Implementation	19 days	4/22/2004	5/18/2004	
371	Mobilization/Demobilization	5 days	4/22/2004	4/28/2004	369FS+30 edays
372	LNAPL Delineation	5 days	4/29/2004	5/5/2004	371
373	Potential Conduits Evaluation	3 days	5/6/2004	5/10/2004	372,359
374	Aquifer Testing via Tidal Evaluation	6 days	5/11/2004	5/18/2004	373
375	Treatment System Evaluation	5 days	4/22/2004	4/28/2004	371SS
376	UDC Technical Memorandum	56 days	5/19/2004	8/9/2004	
377	Draft UDC TM Preparation	30 days	5/19/2004	6/30/2004	374
378	PRP Group Review	15 days	7/1/2004	7/23/2004	377
379	Final UDC Technical Memorandum	10 days	7/26/2004	8/6/2004	378
380	Submittal to DEQ	1 day	8/9/2004	8/9/2004	379
381	TANK-BOTTOM WASTE IRAM DEVELOPMENT (McCALL BP)	429 days	5/13/2002	1/30/2004	
382	Technology Screening	10 days	5/13/2002	5/24/2002	44
383	Detailed Evaluation of Alternatives	10 days	5/28/2002	6/10/2002	382
384	Implementation Plan Proposal	5 days	6/11/2002	6/17/2002	383
385	Review IRAM Implementation Report	5 days	1/26/2004	1/30/2004	164FS+179 days
386					
387	COMMUNITY RELATIONS ACTIVITIES	360 days	4/30/2003	10/11/2004	164
388					
389	PROJECT MANAGEMENT	496 days	7/10/2002	6/30/2004	
390	Phase 1 PM	257 days	7/10/2002	7/15/2003	
411	Phase 2 PM	164 days	4/30/2003	12/30/2003	
434	2004 A PM	126 days	1/5/2004	6/30/2004	
435	PRP Group Meetings 2004	102 days	1/15/2004	6/8/2004	
436	PRP Group Meetings 2004 1	1 day	1/15/2004	1/15/2004	
437	PRP Group Meetings 2004 2	1 day	2/10/2004	2/10/2004	
438	PRP Group Meetings 2004 3	1 day	3/9/2004	3/9/2004	
439	PRP Group Meetings 2004 4	1 day	4/13/2004	4/13/2004	
440	PRP Group Meetings 2004 5	1 day	5/11/2004	5/11/2004	
441	PRP Group Meetings 2004 6	1 day	6/8/2004	6/8/2004	
442	DEQ Meetings 2004A	109 days	1/9/2004	6/11/2004	
449	Monthly Progress Reports 2004 A	107 days	1/12/2004	6/10/2004	
456	Schedule/Budget Tracking	126 days	1/5/2004	6/30/2004	
457	Project Coordination	126 days	1/5/2004	6/30/2004	456SS
458					
459	REMEDIAL INVESTIGATION REPORT PREPARATION	369 days	1/20/2004	7/7/2005	
460	RI Report Outline	10 days	1/20/2004	2/2/2004	436FS+2 days
461	RI Data Elements Compilation	60 days	3/12/2004	6/4/2004	460,201
462	Data Interpretation	60 days	9/17/2004	12/13/2004	461,120,260,294,327,201,377
463	Draft RI Report	40 days	12/14/2004	2/10/2005	462
464	PRP Group Review	20 days	2/11/2005	3/11/2005	463
465	Final Draft RI Report	20 days	3/14/2005	4/8/2005	464
466	DEQ Review	30 edays	4/8/2005	5/8/2005	465
467	Final RI Report	20 days	5/9/2005	6/6/2005	466
468	DEQ Approval	1 day	7/7/2005	7/7/2005	467FS+30 edays
469					
470	RISK ASSESSMENT	294 days	3/1/2004	4/28/2005	
471	Draft Risk Assessment Work Plan	35 days	6/7/2004	7/27/2004	81,190,294,249
472	Data Evaluation	15 days	6/7/2004	6/25/2004	461
473	Exposure Assessment (Update CSM)	10 days	6/28/2004	7/13/2004	472
474	Toxicity Assessment	10 days	7/14/2004	7/27/2004	473
475	Final Risk Assessment Work Plan	25 days	7/28/2004	8/31/2004	474
476	HUMAN HEALTH EVALUATION	27 days	9/16/2004	10/22/2004	
477	Meeting w/DEQ	1 day	9/16/2004	9/16/2004	475FS+15 edays
478	Risk Characterization	15 days	10/4/2004	10/22/2004	477FS+15 edays
479	ECOLOGICAL EVALUATION	143 days	3/1/2004	9/21/2004	
480	Level 1 Ecological Evaluation	21 days	3/1/2004	3/29/2004	
481	Source Document Compilation	5 days	3/1/2004	3/5/2004	436FS+30 days
482	Preliminary Field Assessment	15 days	3/8/2004	3/26/2004	481
483	Level 1 Status Meeting	1 day	3/29/2004	3/29/2004	482
484	L1 Eco Project Management	20 days	3/1/2004	3/26/2004	481SS
485	Level 2 Ecological Evaluation	138 days	3/8/2004	9/21/2004	
486	Level 2 Ecological Evaluation Work Plan	83 days	3/8/2004	7/1/2004	
487	Data Gaps Analysis	5 days	3/30/2004	4/5/2004	483
488	Problem Formulation	5 days	4/6/2004	4/12/2004	487
489	Draft L2 Eco Evaluation Work Plan	15 days	4/13/2004	5/3/2004	488
490	PRP Group Review	10 days	5/4/2004	5/17/2004	489
491	Final L2 Eco Evaluation Work Plan	10 days	5/18/2004	6/1/2004	490
492	DEQ Review	30 edays	6/1/2004	7/1/2004	491
493	L2 Eco Project Management	81 days	3/8/2004	6/29/2004	481
494	Level 2 Ecological Field Program	15 days	7/6/2004	7/26/2004	492

UPDATED SCHEDULE (1/20/04)

**Remedial Investigation/Feasibility Study
Astoria Area-Wide Petroleum Site
Astoria, Oregon**

ID	Task Description	Duration	Start	Finish	Predecessors
495	Exposure Assessment	10 days	7/27/2004	8/9/2004	494
496	Effects Assessment	10 days	8/10/2004	8/23/2004	495
497	Risk Characterization	20 days	8/24/2004	9/21/2004	496
498	REPORTING	128 days	10/25/2004	4/28/2005	
499	Draft Risk Assessment Report	60 days	10/25/2004	1/21/2005	478,497
500	PRP Group Review	15 days	1/24/2005	2/11/2005	499
501	Final Draft Risk Assessment Report	10 days	2/14/2005	2/28/2005	500
502	Submittal to DEQ	1 day	3/1/2005	3/1/2005	501
503	DEQ Review	30 edays	3/1/2005	3/31/2005	502
504	Final Risk Assessment Report	20 days	4/1/2005	4/28/2005	503
505					
506	FEASIBILITY STUDY	187 days	12/14/2004	9/12/2005	
507	Feasibility Study Work Plan	75 days	12/14/2004	4/3/2005	
508	Establish Remedial Action Objectives	5 days	12/14/2004	12/20/2004	462,478,120,190,377
509	Identify General Response Actions	10 days	12/21/2004	1/6/2005	508
510	Determine Preliminary Remediation Goals	5 days	1/7/2005	1/13/2005	509
511	ID/Screen Remedial Technologies	10 days	1/14/2005	1/27/2005	510
512	Draft Feasibility Study Work Plan	10 days	1/28/2005	2/10/2005	511
513	PRP Group Review	10 days	2/11/2005	2/25/2005	512
514	Final Feasibility Study Work Plan	5 days	2/28/2005	3/4/2005	513
515	DEQ Review	30 edays	3/4/2005	4/3/2005	514
516	Feasibility Study Evaluation	40 days	4/4/2005	5/27/2005	
517	Assemble/Screen Remedial Alternatives	10 days	4/4/2005	4/15/2005	515
518	Detailed Analysis	15 days	4/18/2005	5/6/2005	517
519	Compare Remedial Alternatives	10 days	5/9/2005	5/20/2005	518
520	Recommend Preferred Alternative	5 days	5/23/2005	5/27/2005	519
521	Reporting	72 days	5/31/2005	9/12/2005	
522	Draft FS Report	15 days	5/31/2005	6/20/2005	520
523	PRP Group Review	10 days	6/21/2005	7/6/2005	522
524	Final Draft FS Report	10 days	7/7/2005	7/20/2005	523
525	Submittal to DEQ	1 day	7/21/2005	7/21/2005	524
526	DEQ Review	30 edays	7/21/2005	8/20/2005	525
527	Final FS Report	15 days	8/22/2005	9/12/2005	526
528					